Appointment

From: Sands, Jeffrey [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=B2AA28629ADE4AFB8D5EC12A8AAABA54-SANDS, JEFF]
Sent: 1/9/2018 6:11:41 PM
To: Subramanian, Hema [Subramanian.Hema@epa.gov]

Subject: Accepted: Corn Refiners Association meeting w/Jeff Sands
Location: William Jefferson Clinton Building North - Room 2415-A. 1200 Pennsylvania Ave. NW Washington, DC 20004

Start: 1/17/2018 8:00:00 PM
End: 1/17/2018 9:00:00 PM

Recurrence: (none)

Appointment

From: Atkinson, Emily [Atkinson.Emily@epa.gov]
Sent: 1/3/2018 3:48:49 PM
To: Gunasekara, Mandy [Gunasekara.Mandy@epa.gov]; Orlin, David [Orlin.David@epa.gov]; Hengst, Benjamin [Hengst.Benjamin@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]; Sands, Jeffrey [sands.jeffrey@epa.gov]
CC: Argyropoulos, Paul [Argyropoulos.Paul@epa.gov]

Subject: Meet with RFA (Bob Dinneen) and Growth Energy (Emily Sklor) re: possible waiver (Confirmed)
Attachments: Confirmed 1/3/2018 at 3pm: request - Meet with RFA and Growth Energy; attendees
Location: WJC-N 5400 + Video with AA - Ex. 6 Participant Code: Ex. 6

Start: 1/3/2018 8:00:00 PM
End: 1/3/2018 8:30:00 PM
Show Time As: Tentative

Message

From: Michael McKenna [mike@mwrstrat.com]
Sent: 1/3/2018 3:41:38 PM
To: Atkinson, Emily [Atkinson.Emily@epa.gov]
Subject: attendees

Emily -

sorry about the ridiculous number. This is evidently a very popular meeting.

MM

>
> Renewable Fuels Association
> Bob Dinneen
> Matt Morrison
> Bryan Stockton
>
> Growth Energy
> Shailesh Sahay
> Emily Sklor
> John Fure
> Chris Bliley
> Jonathan Martel
>
> American Coalition for Ethanol
> Jonathon Lehman
>
> National Corn Growers Association
> Kathy Bergren
>
> Urban Air Initiative
> Andy Varcoe
> Adam Gustafson
>
> Biotechnology Industries Organization
> Kristin Landis
> Erick Lutt
>

Appointment

From: Atkinson, Emily [Atkinson.Emily@epa.gov]
Sent: 12/15/2017 7:24:34 PM
To: Baptist, Erik [Baptist.Erik@epa.gov]; Sands, Jeffrey [sands.jeffrey@epa.gov]; Hengst, Benjamin [Hengst.Benjamin@epa.gov]; Sutton, Tia [sutton.tia@epa.gov]; Woods, Clinton [woods.clinton@epa.gov]

Subject: Canceled: Meet with Growth Energy, re: RVP (Confirmed)
Attachments: Untitled Attachment; Untitled Attachment
Location: WJC-N 5415 + Ex. 6 Participant Code: Ex. 6

Start: 12/21/2017 8:00:00 PM
End: 12/21/2017 8:45:00 PM
Show Time As: Free

Importance: High

Message

To: Chris Bliley [cbliley@growthenergy.org]

Hi Chris,
You are confirmed for a 45 minute in person meeting on Thursday, December 21, 2017 at 3:00pm EDT with Mandy Gunasekara.
Directions and procedures to 1200 Pennsylvania Avenue NW:

Metro: If you come by Metro get off at the Federal Triangle metro stop. Exit the metro station and go up two sets of escalators to the surface level and turn right. You will see a short staircase and wheelchair ramp leading to a set of glass doors with the EPA logo - that is the William Jefferson Clinton Federal Building, North Entrance.

Taxi: Direct the taxi to drop you off on 12th Street NW, between Constitution and Pennsylvania Avenues, at the elevator for the Federal Triangle metro stop - this is almost exactly half way between the two avenues on 12th Street NW. Facing the building with the EPA logo and American flags, walk toward the building and take the glass door on your right hand side with the escalators going down to the metro on your left – that is the North Lobby of the William Jefferson Clinton building.

Security Procedures: A government issued photo id is required to enter the building and it is suggested you arrive 15 minutes early in order to be cleared and arrive at the meeting room on time. Upon entering the lobby, the meeting attendees will be asked to pass through security and provide a photo ID for entrance. Let the guards know that you were instructed to call 202-564-7404 for a security escort.

Please send me a list of participants in advance of the meeting and feel free to contact me should you need any additional information.

Emily

Emily Atkinson
Management Analyst/Office Manager
Immediate Office of the Assistant Administrator
Office of Air and Radiation, USEPA
Room 5412B, 1200 Pennsylvania Avenue NW
Washington, DC 20460
Voice: 202-564-1850
Email: atkinson.emily@epa.gov

From: Chris Bliley [mailto:cbliley@growthenergy.org]
Sent: Tuesday, December 12, 2017 1:43 PM
To: Atkinson, Emily <Atkinson.Emily@epa.gov>
Subject: RE: RVP Meeting?

Thanks Emily, we'll take it. I'll let you know on attendees from the biofuels side.

From: Atkinson, Emily [mailto:Atkinson.Emily@epa.gov]
Sent: Tuesday, December 12, 2017 11:49 AM
To: Chris Bliley <cbliley@growthenergy.org>
Subject: RE: RVP Meeting?

Hi Chris,

Mandy would have others join her, including OTAQ.

Emily Atkinson
Management Analyst/Office Manager
Immediate Office of the Assistant Administrator
Office of Air and Radiation, USEPA
Room 5412B, 1200 Pennsylvania Avenue NW
Washington, DC 20460
Voice: 202-564-1850
Email: atkinson.emily@epa.gov

From: Chris Bliley [mailto:cbliley@growthenergy.org]
Sent: Tuesday, December 12, 2017 11:45 AM
To: Atkinson, Emily <Atkinson.Emily@epa.gov>
Subject: RE: RVP Meeting?

Thanks Emily, I need to check with some other folks on my end on their availability. Just for clarification, is this just Mandy or will this include a number of people from OTAQ etc?

From: Atkinson, Emily [mailto:Atkinson.Emily@epa.gov]
Sent: Tuesday, December 12, 2017 11:21 AM
To: Chris Bliley <cbliley@growthenergy.org>
Subject: RE: RVP Meeting?

Hi Chris,

Mandy Gunasekara has reviewed this request and asked that I find 45 minute for an in person meeting.

It looks like we could fit this in Thursday, December 21, 2017 at 3:00pm EDT.

Please advise if this could work on your end.

Emily Atkinson
Management Analyst/Office Manager
Immediate Office of the Assistant Administrator
Office of Air and Radiation, USEPA
Room 5412B, 1200 Pennsylvania Avenue NW
Washington, DC 20460
Voice: 202-564-1850
Email: atkinson.emily@epa.gov

> **From:** Chris Bliley <cbliley@growthenergy.org>
> **Date:** December 8, 2017 at 1:58:20 PM EST
> **To:** "Gunasekara, Mandy" <Gunasekara.Mandy@epa.gov>, "Dominguez, Alexander" <dominguez.alexander@epa.gov>
> **Cc:** "Atkinson, Emily" <Atkinson.Emily@epa.gov>
> **Subject: RE: RVP Meeting?**

Thanks Mandy, I'll send dates from our end, but if there are any particularly good or bad days on your end, let us know and I can see if that works for us.

From: Gunasekara, Mandy [mailto:Gunasekara.Mandy@epa.gov]
Sent: Friday, December 8, 2017 1:55 PM
To: Chris Bliley <cbliley@growthenergy.org>; Dominguez, Alexander <dominguez.alexander@epa.gov>
Cc: Atkinson, Emily <Atkinson.Emily@epa.gov>
Subject: RE: RVP Meeting?

Hey Chris, Looping in Emily on this to help with logistics. Chris, did you have specific days in mind? December is pretty full, but we'll see what we can do.
Thanks,
Mandy

From: Chris Bliley [mailto:cbliley@growthenergy.org]
Sent: Friday, December 8, 2017 1:51 PM
To: Dominguez, Alexander <dominguez.alexander@epa.gov>
Cc: Gunasekara, Mandy <Gunasekara.Mandy@epa.gov>
Subject: RE: RVP Meeting?

Alex and Mandy,

Circling back on this to try and get this meeting scheduled as we have some industry views that may be helpful on the RVP evaluation. Thanks and just let me know.

Chris

From: Dominguez, Alexander [mailto:dominguez.alexander@epa.gov]
Sent: Monday, October 30, 2017 6:35 PM
To: Chris Bliley <cbliley@growthenergy.org>
Cc: Gunasekara, Mandy <Gunasekara.Mandy@epa.gov>
Subject: RE: RVP Meeting?

Chris,

Mandy will be on travel the majority of November so we are looking at December for a meeting. I'm more than happy to set up a meeting for when she returns. I will put a reminder on the calendar, but if you could please follow up mid-November when I have a better sense on the December schedule that would be appreciated.

Best,
Alex

Alex Dominguez
Policy Analyst to the Deputy Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

From: Chris Bliley [mailto:cbliley@growthenergy.org]
Sent: Monday, October 30, 2017 12:27 PM
To: Gunasekara, Mandy <Gunasekara.Mandy@epa.gov>; Dominguez, Alexander <dominguez.alexander@epa.gov>
Subject: RVP Meeting?

Alex and Mandy,

Hope this finds you well. My understanding is that there is a request in for an industry-wide meeting (us, Renewable Fuels Association, National Corn Growers et al) with you all on RVP (request I believe was coming from RFA) and just wanted to confirm that's on your radar for some time soon as we wanted to make sure we had the right people available. Let me know when you have a minute. Thanks and look forward to the discussion.

Chris

Chris Bliley | Vice President, Regulatory Affairs
Growth Energy
701 8th St NW Suite 450
Washington DC 20001
OFFICE Ex. 6 CELL Ex. 6
TWITTER @GrowthEnergy
FACEBOOK growthenergy.org/facebook
WEBSITE www.growthenergy.org

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Message

To: cbliley@growthenergy.org

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Emily Atkinson
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To: "Gunasekara, Mandy" <Gunasekara.Mandy@epa.gov>, "Dominguez, Alexander" <dominguez.alexander@epa.gov>
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Alex Dominguez
Policy Analyst to the Deputy Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency

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Chris

Chris Bliley | Vice President, Regulatory Affairs
Growth Energy
701 8th St NW Suite 450
Washington DC 20001
OFFICE Ex. 6 CELL Ex. 6
TWITTER @GrowthEnergy
FACEBOOK growthenergy.org/facebook
WEBSITE www.growthenergy.org

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Appointment

From: Subramanian, Hema [Subramanian.Hema@epa.gov]
Sent: 1/8/2018 10:12:47 PM
To: Subramanian, Hema [Subramanian.Hema@epa.gov]; Sands, Jeffrey [sands.jeffrey@epa.gov]; kharris@corn.org; maxwilliamson@williamsonlawpolicy.com

Subject: Corn Refiners Association meeting w/Jeff Sands
Location: William Jefferson Clinton Building North - Room 2415-A. 1200 Pennsylvania Ave. NW Washington, DC 20004

Start: 1/17/2018 8:00:00 PM
End: 1/17/2018 9:00:00 PM
Show Time As: Busy

Appointment

From: Mortensen, Ginah [mortensen.ginah@epa.gov]
Sent: 10/18/2017 9:55:11 PM
To: Mortensen, Ginah [mortensen.ginah@epa.gov]; Adkins, Tabatha [Adkins.Tabatha@epa.gov]; Ager, Sara [Ager.Sara@epa.gov]; Allnutt, David [Allnutt.David@epa.gov]; amend, carol [amend.carol@epa.gov]; Arvizu, Christy [Arvizu.Christy@epa.gov]; Back, Tracy [back.tracy@epa.gov]; Bartenfelder, David [Bartenfelder.David@epa.gov]; Baumgartner, Donald [baumgartner.donald@epa.gov]; Bishop, Debbie [Bishop.Debbie@epa.gov]; Bloom, Judy [Bloom.Judy@epa.gov]; Boos, Gerard [Boos.Gerard@epa.gov]; Bravo, Antonio [Bravo.Antonio@epa.gov]; Breedlove, Dan [Breedlove.Dan@epa.gov]; Brown, Dan [Brown.Dan@epa.gov]; Burchard, Robert [Burchard.Robert@epa.gov]; Burns, Ward [Burns.Ward@epa.gov]; Butler, John [Butler.JohnJ@epa.gov]; Cabrera-Stagno, Valentina [Cabrera-Stagno.Valentina@epa.gov]; Carter-Jenkins, Shakeba [Carter-Jenkins.Shakeba@epa.gov]; Coats, Andrea [Coats.Andrea@epa.gov]; Collins, Jerry [collins.jerry@epa.gov]; Costa, Allison [Costa.Allison@epa.gov]; Daniels, Jason [Daniels.Jason@epa.gov]; DeHaven, Leigh [DeHaven.Leigh@epa.gov]; Downing, Jane [Downing.Jane@epa.gov]; Drake, Wendy [drake.wendy@epa.gov]; Dunkins, Robin [Dunkins.Robin@epa.gov]; Dunlevy, Robert [Dunlevy.Robert@epa.gov]; Dygowski, Laurel [Dygowski.Laurel@epa.gov]; Fenton, Kathleen [Fenton.Kathleen@epa.gov]; Fergusson, Bruce [Fergusson.Bruce@epa.gov]; Figueroa, Zaida [Figueroa.Zaida@epa.gov]; Fisher, Jacqueline [Fisher.Jacqueline@epa.gov]; Fitz, Nancy [Fitz.Nancy@epa.gov]; Flahive, Katie [Flahive.Katie@epa.gov]; Frizzell, Damon [Frizzell.Damon@epa.gov]; Galloway, Carol [Galloway.Carol@epa.gov]; Gargas, Toni [Gargas.Toni@epa.gov]; gfritz@usgs.gov; Gilbert, Neal [Gilbert.Neal@epa.gov]; Gould, Stephen [Gould.Stephen@epa.gov]; Gratz, Jeff [Gratz.Jeff@epa.gov]; Greenwald, Kathryn [Greenwald.Kathryn@epa.gov]; greg.johnson@por.usda.gov; Grier, Gina [Grier.Gina@epa.gov]; Grisier, Mary [Grisier.Mary@epa.gov]; Gunter, Jason [gunter.jason@epa.gov]; Halstead, Amanda [halstead.amanda@epa.gov]; Hamera, Donald [Hamera.Don@epa.gov]; Hart, Debbi [Hart.Debbi@epa.gov]; Heinemann, Kristina [Heinemann.Kristina@epa.gov]; Horak, David [horak.david@epa.gov]; Horchem, Brad [horchem.brad@epa.gov]; Howard, MarkW [Howard.MarkW@epa.gov]; Howland, Sanda [Howland.Sanda@epa.gov]; Hubert, Gayle [Hubert.Gayle@epa.gov]; Hyde, Tinka [hyde.tinka@epa.gov]; Jackson, Robert W. [Jackson.Robertw@epa.gov]; Jacobs, Kira [Jacobs.Kira@epa.gov]; 'jcoles@usgs.gov' [jcoles@usgs.gov]; Johnson, James [Johnson.James@epa.gov]; Kasai, Jeanne [Kasai.Jeanne@epa.gov]; Schefski, Melissa [Schefski.Melissa@epa.gov]; Keaney, Kevin [Keaney.Kevin@epa.gov]; Koethe, Robert [Koethe.Robert@epa.gov]; Krudner, Maureen [Krudner.Maureen@epa.gov]; Kupchan, Simma [Kupchan.Simma@epa.gov]; Lamb, Brad [lamb.brad@epa.gov]; Lancaster, Kris [Lancaster.Kris@epa.gov]; Larsen, Erika [Larsen.Erika@epa.gov]; Lehman, Stuart [Lehman.Stuart@epa.gov]; Lemieux, Paul [Lemieux.Paul@epa.gov]; LEVIN, NANCY [Levin.Nancy@epa.gov]; Longo, Linda [Longo.Linda@epa.gov]; Lubbe, Wendy [Lubbe.Wendy@epa.gov]; MacIntyre, Mark [Macintyre.Mark@epa.gov]; Mahoney, Michele [Mahoney.Michele@epa.gov]; Matthews, Mark [Matthews.Mark@epa.gov]; McCullough, Hugh [McCullough.Hugh@epa.gov]; 'mdraper@nifa.usda.gov' [mdraper@nifa.usda.gov]; Mitschele, Becky [Mitschele.Becky@epa.gov]; Moore, Audrey [Moore.Audrey@epa.gov]; Moses, Althea [Moses.Althea@epa.gov]; Nuhfer, Mark [Nuhfer.Mark@epa.gov]; Olszyk, David [Olszyk.David@epa.gov]; Ostigaard, Crystal [Ostigaard.Crystal@epa.gov]; Peak, Nicholas [Peak.Nicholas@epa.gov]; Perreault, Peg [Perreault.Peg@epa.gov]; Perrin, Rebecca [Perrin.Rebecca@epa.gov]; Peterson, Samuel [Peterson.Samuel@epa.gov]; Phillips, Todd [Phillips.Todd@epa.gov]; Pierce, Troy [Pierce.Troy@epa.gov]; Pinkerton, Kate [Pinkerton.Kate@epa.gov]; Plymale, Chris [Plymale.Christopher@epa.gov]; Pollard, Stephen [Pollard.Stephen@epa.gov]; Pont, Richard [Pont.Richard@epa.gov]; Porter, Donna [Porter.Donna@epa.gov]; Rao, Kate [Rao.kate@epa.gov]; Ridley, Caroline [Ridley.Caroline@epa.gov]; Rise, David [rise.david@epa.gov]; Roberto, Joseph [Roberto.Joseph@epa.gov]; Roberts, Rickey [Roberts.Rickey@epa.gov]; Sampath, Sam [Sampath.Sam@epa.gov]; Sarokin, David [Sarokin.David@epa.gov]; Schademann, Randy [Schademann.Randy@epa.gov]; Schafer, Jeannette [schafer.jeannette@epa.gov]; Schrock, Bill [Schrock.Bill@epa.gov]; Shenk, Kelly [shenk.kelly@epa.gov]; Shields, Amy [Shields.Amy@epa.gov]; 'sjkalkho@usgs.gov' [sjkalkho@usgs.gov]; Socha, Julianne [socha.julianne@epa.gov]; Spaulding, William [spaulding.william@epa.gov]; Sperry, Clint [Sperry.Clint@epa.gov]; Stevenson, Michelle [Stevenson.Michelle@epa.gov]; Stevenson, Suzanne [Stevenson.Suzanne@epa.gov]; Stoy, Alyse [Stoy.Alyse@epa.gov]; Suffian, Fred [Suffian.Fred@epa.gov]; Sullivan, Tim [Sullivan.Tim@epa.gov]; Swackhammer, J-Troy [Swackhammer.J-Troy@epa.gov]; Szylvian, Andrea M. [Szylvian.Andrea@epa.gov]; Tankersley, Julie [Tankersley.Julie@epa.gov]; Terada, Derrick [Terada.Derrick@epa.gov]; Thilsted, Eugene [Thilsted.Eugene@epa.gov]; Thomas, Derval [Thomas.Derval@epa.gov]; Thomas, Paul [thomas.paul@epa.gov]; Urban, Trevor [Urban.Trevor@epa.gov]; Utting, George [Utting.George@epa.gov]; VanTil, Barbara [vantil.barbara@epa.gov]; Weiler, Gregory [weiler.gregory@epa.gov]; Weinberg, Anne [Weinberg.Anne@epa.gov]; Werntz, James [Werntz.James@epa.gov]; Wilkinson, Bruce [wilkinson.bruce@epa.gov]; Winiecki, Eric

[Winiecki.Eric@epa.gov]; Winn, G. Dean [winn.gerald@epa.gov]; Winnett, Steven [winnett.steven@epa.gov]; Yaras, Michelle [Yaras.Michelle@epa.gov]; Young, Carl [young.carl@epa.gov]; Ziegler, Sam [Ziegler.Sam@epa.gov]; Zimmer, Andrea [Zimmer.Andrea@epa.gov]; Zimmerman, Dea [Zimmerman.Dea@epa.gov]; Bonnelycke, Nina [Bonnelycke.Nina@epa.gov]; Whitehurst, Shanika [whitehurst.shanika@epa.gov]; Subramanian, Hema [Subramanian.Hema@epa.gov]; Arling, Michelle [Arling.Michelle@epa.gov]; Green, Holly [Green.Holly@epa.gov]; Edmondson, Lucy [Edmondson.Lucy@epa.gov]; Robertson, Duane [Robertson.Duane@epa.gov]; Carlson, Christopher -FS [ccarlson@fs.fed.us]; Woodward, Cheryl [Woodward.Cheryl@epa.gov]; Jones-Johnson, Shea [Jones-Johnson.Shea@epa.gov]; Palomares, Art [Palomares.Art@epa.gov]; Lynch, Katie [Lynch.Katie@epa.gov]; Greg Zwicke [greg.zwicke@ftc.usda.gov]; ted.strauss@ca.usda.gov; johnnie.siliznoff@ca.usda.gov; 'jwfrey@usgs.gov' [jwfrey@usgs.gov]; O'Donnell, Thomas K. [ODonnell.Thomas@epa.gov]; 'karma.anderson@por.usda.gov' [karma.anderson@por.usda.gov]; Gioffre, Patricia [Gioffre.Patricia@epa.gov]; Roberts, Connie [Roberts.Connie@epa.gov]; Aaron, Mark [aaron.mark@epa.gov]; McGown, Michael [McGown.Michael@epa.gov]; Anderson-Carnahan, Linda [Anderson-Carnahan.Linda@epa.gov]; Carlson, Rachel [Carlson.Rachel@epa.gov]; Comerford, Sherri [Comerford.Sherri@epa.gov]; Lawrence, Patty - NRCS, Washington, DC [Patty.Lawrence@wdc.usda.gov]; Freeman, Tamara [Freeman.Tamara@epa.gov]; Aspy, Dale [Aspy.Dale@epa.gov]; Bassett, Jay [Bassett.Jay@epa.gov]; Bingham, Kimberly [Bingham.Kimberly@epa.gov]; Cheeks, Thornell [Cheeks.Thornell@epa.gov]; Davis, Molly [Davis.Molly@epa.gov]; Davis, Scott [Davis.ScottR@epa.gov]; Fifadara, Dipesh [Fifadara.Dipesh@epa.gov]; Gillam, Rick [Gillam.Rick@epa.gov]; Huey, Joel [Huey.Joel@epa.gov]; Johnston, Jon [Johnston.Jon@epa.gov]; Laycock, Kelly [Laycock.Kelly@epa.gov]; Newbold, Amy [Newbold.Amy@epa.gov]; Powell, Alan [Powell.Alan@epa.gov]; Strange, Joel [Strange.Joel@epa.gov]; Thomas, Chris [Thomas.Chris@epa.gov]; Webster, James [Webster.James@epa.gov]; Wylie, Mike [Wylie.Mike@epa.gov]; Echeverria, Marietta [Echeverria.Marietta@epa.gov]; Goodis, Michael [Goodis.Michael@epa.gov]; Ziobro, Joseph [Ziobro.Joseph@epa.gov]; Carbone, Chad [Carbone.Chad@epa.gov]; Taylor, Timothy [Taylor.Timothy@epa.gov]; Summerlin, Joe [summerlin.joe@epa.gov]; Melnick, Rachel - NIFA [RMelnick@nifa.usda.gov]; Spence, Kelley [Spence.Kelley@epa.gov]; Helder, Dirk [Helder.Dirk@epa.gov]; Billups, Angie [Billups.Angie@epa.gov]; Melanson, Kate [Melanson.Kate@epa.gov]; Murphy, Jim [Murphy.Jim@epa.gov]; Perkins, Stephen [Perkins.Stephen@epa.gov]; Taylor, TeAndra [Taylor.TeAndra@epa.gov]; Quigley, Heather [Quigley.Heather@epa.gov]; Murdie, Ashley [murdie.ashley@epa.gov]; Park, Jennifer [park.jennifer@epa.gov]; Calvo, Estrella [calvo.estrella@epa.gov]; Rush, Randall [Rush.Randall@epa.gov]; Giddings, Daniel [giddings.daniel@epa.gov]; OBrien, Wendy [OBrien.Wendy@epa.gov]; Farris, Laura [Farris.Laura@epa.gov]; Ferris, Lena [Ferris.Lena@epa.gov]; Williams, Joe [Williams.Joe@epa.gov]; Flournoy, Karen [Flournoy.Karen@epa.gov]; LUEHE, DOUGLAS [luehe.douglas@epa.gov]; Holst, Linda [holst.linda@epa.gov]; Damico, Brian [Damico.Brian@epa.gov]; Sands, Jeffrey [sands.jeffrey@epa.gov]; Sanzone, Stephanie [Sanzone.Stephanie@epa.gov]

CC: Ellington, Natalie [Ellington.Natalie@epa.gov]; FertikEdgerton, Rachel [FertikEdgerton.Rachel@epa.gov]; Lane, Willie [Lane.Willie@epa.gov]; Honker, William [honker.william@epa.gov]; Lawrence, Rob [Lawrence.Rob@epa.gov]; Argyropoulos, Paul [Argyropoulos.Paul@epa.gov]; Molloy, Jennifer [molloy.jennifer@epa.gov]; Chu, Karen [Chu.Karen@epa.gov]; Wirth, Karen [Wirth.Karen@epa.gov]; Williams, Bo (James) [Williams.James@epa.gov]; Schaeffer, Blake [Schaeffer.Blake@epa.gov]; Greene, Rick [Greene.Rick@epa.gov]; Chan, Janice [Chan.Janice@epa.gov]; Morant, Mervalin - NIFA [MMorant@nifa.usda.gov]; Berg, ElizabethG [Berg.ElizabethG@epa.gov]; Culver, Edison [Culver.Edison@epa.gov]; Hubbard, Joseph [Hubbard.Joseph@epa.gov]; Watson, Jane [watson.jane@epa.gov]; Crocker, Philip [crocker.philip@epa.gov]; Dwyer, Stacey [Dwyer.Stacey@epa.gov]; Ruiz, Thomas [Ruiz.Thomas@epa.gov]; Garcia, David [Garcia.David@epa.gov]; Cooper, WilliamF [Cooper.WilliamF@epa.gov]; Kaspar, Paul [kaspar.paul@epa.gov]; Hamilton, Denise [hamilton.denise@epa.gov]; Abshire, Andrea [Abshire.Andrea@epa.gov]; Bailley, Treasure [bailley.treasure@epa.gov]; Basile, Alfred [Basile.Alfred@epa.gov]; Hutchinson, Marcella [Hutchinson.Marcella@epa.gov]; Ismert, Peter [Ismert.Peter@epa.gov]; Kleeman, Gary [Kleeman.Gary@epa.gov]; Monahan, Peter [Monahan.Peter@epa.gov]; Oberley, Gregory [Oberley.Gregory@epa.gov]; Pfeiffer, Tricia [Pfeiffer.Tricia@epa.gov]; Steinhaus, Eric [Steinhaus.Eric@epa.gov]; Truskowski, Brent [truskowski.brent@epa.gov]; Canino, Richard [Canino.Richard@epa.gov]; Delapuente, Alejandro [adelapue@nsf.gov]; Wooster, Richard [Wooster.Richard@epa.gov]; Eric Nystrom (nystrom.eric@epa.gov) [nystrom.eric@epa.gov]; Sidrah Khan (khan.sidrah@epa.gov) [khan.sidrah@epa.gov]; Jones, Kristin [jones.kristin@epa.gov]; Kensinger, Justin [kensinger.justin@epa.gov]; Ortiz, Eduardo [Ortiz.Eduardo@epa.gov]; Restivo, Angela [Restivo.Angela@epa.gov]; Reinhart, Jill - NRCS, Indianapolis, IN [jill.reinhart@in.usda.gov]; Wooster-Brown, Catherine [Wooster-Brown.Catherine@epa.gov]; Jones, Margaret [jones.margaret@epa.gov]; McDonald, Holly [mcdonald.holly@epa.gov]; Foreman, Katherine [Foreman.Katherine@epa.gov]; Rivera-Lupianez, Ana [Rivera-Lupianez.Ana@epa.gov]; Nitsch, Chad [Nitsch.Chad@epa.gov]; Drake, Kerry [Drake.Kerry@epa.gov]; TENBROOK, PATTI [tenbrook.patti@epa.gov]; Gill, Sonam [Gill.Sonam@epa.gov]; Rea, Anne [Rea.Anne@epa.gov]; Dominy, Randy [dominy.randy@epa.gov]; Hayes, Mark [hayes.mark@epa.gov]; Quinn, Wilonda [quinn.wilonda@epa.gov];

Thompson, Craig [Thompson.Craig@epa.gov]; Cashdollar, Jennifer [Cashdollar.Jennifer@epa.gov]; Johnston, JohnM [Johnston.JohnM@epa.gov]; Muche, Muluken [muche.muluken@epa.gov]; Sharpe, Kristinn [Sharpe.Kristinn@epa.gov]; Corona, Elizabeth [Corona.Elizabeth@epa.gov]; Magnan, Eric [Magnan.Eric@epa.gov]; Yin, Christina [Yin.Christina@epa.gov]; Gillen, Cara [Gillen.Cara@epa.gov]; Louis, Gail [Louis.Gail@epa.gov]; Berry, Vern [Berry.Vern@epa.gov]; Rodriguez-Hunt, Magda [Rodriguez-Hunt.Magda@epa.gov]; Kilgo, James [kilgo.james@epa.gov]; Gesalman, Claire [Gesalman.Claire@epa.gov]; EPA Smart Sectors [sectors@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]; Miller, Amy [Miller.Amy@epa.gov]; Brennan, Ross [Brennan.Ross@epa.gov]

Subject: Monthly Ag Issues Forum Call - New Recurring Scheduler; Call-in number Ex. 6 Ex. 6
Attachments: Agenda Attached: Monthly Ag Issues Forum Call - Recurring Scheduler ; Agenda Attached: Monthly Ag Issues Forum Call - Recurring Scheduler; Call-in number Ex. 6 Ex. 6
Location: Call-in number Ex. 6 Ex. 6

Start: 2/26/2015 7:30:00 PM
End: 2/26/2015 9:00:00 PM
Show Time As: Tentative

Recurrence: Monthly
the fourth Thursday of every 1 month(s) from 1:30 PM to 3:00 PM

To: 'ccarlson@fs.fed.us' [ccarlson@fs.fed.us]; 'greg.zwicke@ftc.usda.gov' [greg.zwicke@ftc.usda.gov]; Mortensen, Ginah [mortensen.ginah@epa.gov]; Adkins, Tabatha [Adkins.Tabatha@epa.gov]; Ager, Sara [Ager.Sara@epa.gov]; Allnutt, David [Allnutt.David@epa.gov]; amend, carol [amend.carol@epa.gov]; Arvizu, Christy [Arvizu.Christy@epa.gov]; Back, Tracy [back.tracy@epa.gov]; Bartenfelder, David [Bartenfelder.David@epa.gov]; Baumgartner, Donald [baumgartner.donald@epa.gov]; Bishop, Debbie [Bishop.Debbie@epa.gov]; Bloom, Judy [Bloom.Judy@epa.gov]; Boos, Gerard [Boos.Gerard@epa.gov]; Bravo, Antonio [Bravo.Antonio@epa.gov]; Breedlove, Dan [Breedlove.Dan@epa.gov]; Brown, Dan [Brown.Dan@epa.gov]; Burchard, Robert [Burchard.Robert@epa.gov]; Burns, Ward [Burns.Ward@epa.gov]; Butler, John [Butler.JohnJ@epa.gov]; Cabrera-Stagno, Valentina [Cabrera-Stagno.Valentina@epa.gov]; Carter-Jenkins, Shakeba [Carter-Jenkins.Shakeba@epa.gov]; Coats, Andrea [Coats.Andrea@epa.gov]; Collins, Jerry [collins.jerry@epa.gov]; Costa, Allison [Costa.Allison@epa.gov]; Daniels, Jason [Daniels.Jason@epa.gov]; DeHaven, Leigh [DeHaven.Leigh@epa.gov]; Downing, Jane [Downing.Jane@epa.gov]; Drake, Wendy [drake.wendy@epa.gov]; Dunkins, Robin [Dunkins.Robin@epa.gov]; Dunlevy, Robert [Dunlevy.Robert@epa.gov]; Dygowski, Laurel [Dygowski.Laurel@epa.gov]; Fenton, Kathleen [Fenton.Kathleen@epa.gov]; Fergusson, Bruce [Fergusson.Bruce@epa.gov]; Figueroa, Zaida [Figueroa.Zaida@epa.gov]; Fisher, Jacqueline [Fisher.Jacqueline@epa.gov]; Fitz, Nancy [Fitz.Nancy@epa.gov]; Flahive, Katie [Flahive.Katie@epa.gov]; Frizzell, Damon [Frizzell.Damon@epa.gov]; Galloway, Carol [Galloway.Carol@epa.gov]; Gargas, Toni [Gargas.Toni@epa.gov]; Gilbert, Neal [Gilbert.Neal@epa.gov]; Gould, Stephen [Gould.Stephen@epa.gov]; Gratz, Jeff [Gratz.Jeff@epa.gov]; Greenwald, Kathryn [Greenwald.Kathryn@epa.gov]; greg.johnson@por.usda.gov; Grier, Gina [Grier.Gina@epa.gov]; Grisier, Mary [Grisier.Mary@epa.gov]; Gunter, Jason [gunter.jason@epa.gov]; Halstead, Amanda [halstead.amanda@epa.gov]; Hamera, Donald [Hamera.Don@epa.gov]; Hart, Debbi [Hart.Debbi@epa.gov]; Heinemann, Kristina [Heinemann.Kristina@epa.gov]; Horak, David [horak.david@epa.gov]; Horchem, Brad [horchem.brad@epa.gov]; Howard, MarkW [Howard.MarkW@epa.gov]; Howland, Sanda [Howland.Sanda@epa.gov]; Hubert, Gayle [Hubert.Gayle@epa.gov]; Hyde, Tinka [hyde.tinka@epa.gov]; Jackson, Robert W. [Jackson.Robertw@epa.gov]; Jacobs, Kira [Jacobs.Kira@epa.gov]; Johnson, James [Johnson.James@epa.gov]; Kasai, Jeanne [Kasai.Jeanne@epa.gov]; Schefski, Melissa [Schefski.Melissa@epa.gov]; Keaney, Kevin [Keaney.Kevin@epa.gov]; Koethe, Robert [Koethe.Robert@epa.gov]; Krudner, Maureen [Krudner.Maureen@epa.gov]; Kupchan, Simma [Kupchan.Simma@epa.gov]; Lamb, Brad [lamb.brad@epa.gov]; Lancaster, Kris [Lancaster.Kris@epa.gov]; Larsen, Erika [Larsen.Erika@epa.gov]; Lehman, Stuart [Lehman.Stuart@epa.gov]; Lemieux, Paul [Lemieux.Paul@epa.gov]; LEVIN, NANCY [Levin.Nancy@epa.gov]; Longo, Linda [Longo.Linda@epa.gov]; Lubbe, Wendy [Lubbe.Wendy@epa.gov]; MacIntyre, Mark [Macintyre.Mark@epa.gov]; Mahoney, Michele [Mahoney.Michele@epa.gov]; Matthews, Mark [Matthews.Mark@epa.gov]; McCullough, Hugh [McCullough.Hugh@epa.gov]; Mitschele, Becky [Mitschele.Becky@epa.gov]; Moore, Audrey [Moore.Audrey@epa.gov]; Moses, Althea [Moses.Althea@epa.gov]; Nuhfer, Mark [Nuhfer.Mark@epa.gov]; Olszyk, David [Olszyk.David@epa.gov]; Ostigaard, Crystal [Ostigaard.Crystal@epa.gov]; Peak, Nicholas [Peak.Nicholas@epa.gov]; Perreault, Peg [Perreault.Peg@epa.gov]; Perrin, Rebecca [Perrin.Rebecca@epa.gov]; Peterson, Samuel [Peterson.Samuel@epa.gov]; Phillips, Todd [Phillips.Todd@epa.gov]; Pierce, Troy [Pierce.Troy@epa.gov]; Pinkerton, Kate [Pinkerton.Kate@epa.gov]; Plymale, Chris [Plymale.Christopher@epa.gov]; Pollard, Stephen [Pollard.Stephen@epa.gov]; Pont, Richard [Pont.Richard@epa.gov]; Porter, Donna [Porter.Donna@epa.gov]; Rao, Kate [Rao.kate@epa.gov]; Ridley, Caroline [Ridley.Caroline@epa.gov]; Rise, David [rise.david@epa.gov]; Roberto, Joseph [Roberto.Joseph@epa.gov]; Roberts, Rickey [Roberts.Rickey@epa.gov]; Sampath, Sam [Sampath.Sam@epa.gov]; Sarokin, David [Sarokin.David@epa.gov]; Schademann, Randy [Schademann.Randy@epa.gov]; Schafer, Jeannette [schafer.jeannette@epa.gov]; Schrock, Bill [Schrock.Bill@epa.gov]; Shenk, Kelly [shenk.kelly@epa.gov]; Shields, Amy [Shields.Amy@epa.gov]; Socha, Julianne [socha.julianne@epa.gov]; Spaulding, William [spaulding.william@epa.gov]; Sperry, Clint [Sperry.Clint@epa.gov]; Stevenson, Michelle [Stevenson.Michelle@epa.gov]; Stevenson, Suzanne [Stevenson.Suzanne@epa.gov]; Stoy, Alyse [Stoy.Alyse@epa.gov]; Suffian, Fred [Suffian.Fred@epa.gov]; Sullivan, Tim [Sullivan.Tim@epa.gov]; Swackhammer, J-Troy [Swackhammer.J-Troy@epa.gov]; Szylvian, Andrea M. [Szylvian.Andrea@epa.gov]; Tankersley, Julie [Tankersley.Julie@epa.gov]; Terada, Derrick [Terada.Derrick@epa.gov]; Thilsted, Eugene [Thilsted.Eugene@epa.gov]; Thomas, Derval [Thomas.Derval@epa.gov]; Thomas, Paul [thomas.paul@epa.gov]; Urban, Trevor [Urban.Trevor@epa.gov]; Utting, George [Utting.George@epa.gov]; VanTil, Barbara [vantil.barbara@epa.gov]; Weiler, Gregory [weiler.gregory@epa.gov]; Weinberg, Anne [Weinberg.Anne@epa.gov]; Werntz, James [Werntz.James@epa.gov]; Wilkinson, Bruce [wilkinson.bruce@epa.gov]; Winiecki, Eric [Winiecki.Eric@epa.gov]; Winn, G. Dean [winn.gerald@epa.gov]; Winnett, Steven [winnett.steven@epa.gov]; Yaras, Michelle [Yaras.Michelle@epa.gov]; Young, Carl [young.carl@epa.gov]; Ziegler, Sam [Ziegler.Sam@epa.gov]; Zimmer, Andrea [Zimmer.Andrea@epa.gov]; Zimmerman, Dea [Zimmerman.Dea@epa.gov]; Bonnelycke, Nina

[Bonnelycke.Nina@epa.gov]; Whitehurst, Shanika [whitehurst.shanika@epa.gov]; Subramanian, Hema [Subramanian.Hema@epa.gov]; Arling, Michelle [Arling.Michelle@epa.gov]; Green, Holly [Green.Holly@epa.gov]; Edmondson, Lucy [Edmondson.Lucy@epa.gov]; Robertson, Duane [Robertson.Duane@epa.gov]; Woodward, Cheryl [Woodward.Cheryl@epa.gov]; Jones-Johnson, Shea [Jones-Johnson.Shea@epa.gov]; Palomares, Art [Palomares.Art@epa.gov]; Lynch, Katie [Lynch.Katie@epa.gov]; ted.strauss@ca.usda.gov; johnnie.siliznoff@ca.usda.gov; O'Donnell, Thomas K. [ODonnell.Thomas@epa.gov]; Gioffre, Patricia [Gioffre.Patricia@epa.gov]; Roberts, Connie [Roberts.Connie@epa.gov]; Aaron, Mark [aaron.mark@epa.gov]; McGown, Michael [McGown.Michael@epa.gov]; Comerford, Sherri [Comerford.Sherri@epa.gov]; Carbone, Chad [Carbone.Chad@epa.gov]; Taylor, Timothy [Taylor.Timothy@epa.gov]; Summerlin, Joe [summerlin.joe@epa.gov]; Spence, Kelley [Spence.Kelley@epa.gov]; Billups, Angie [Billups.Angie@epa.gov]; Melanson, Kate [Melanson.Kate@epa.gov]; Perkins, Stephen [Perkins.Stephen@epa.gov]; Taylor, TeAndra [Taylor.TeAndra@epa.gov]; Quigley, Heather [Quigley.Heather@epa.gov]; Murdie, Ashley [murdie.ashley@epa.gov]; Park, Jennifer [park.jennifer@epa.gov]; Calvo, Estrella [calvo.estrella@epa.gov]; Rush, Randall [Rush.Randall@epa.gov]; Giddings, Daniel [giddings.daniel@epa.gov]; OBrien, Wendy [OBrien.Wendy@epa.gov]; Farris, Laura [Farris.Laura@epa.gov]; Ferris, Lena [Ferris.Lena@epa.gov]; Williams, Joe [Williams.Joe@epa.gov]; Flournoy, Karen [Flournoy.Karen@epa.gov]; LUEHE, DOUGLAS [luehe.douglas@epa.gov]; Holst, Linda [holst.linda@epa.gov]; Damico, Brian [Damico.Brian@epa.gov]; gfritz@usgs.gov; 'jcoles@usgs.gov' [jcoles@usgs.gov]; 'mdraper@nifa.usda.gov' [mdraper@nifa.usda.gov]; 'sjkalkho@usgs.gov' [sjkalkho@usgs.gov]; Carlson, Christopher -FS [ccarlson@fs.fed.us]; Greg Zwicke [greg.zwicke@ftc.usda.gov]; 'jwfrey@usgs.gov' [jwfrey@usgs.gov]; 'karma.anderson@por.usda.gov' [karma.anderson@por.usda.gov]; Anderson-Carnahan, Linda [Anderson-Carnahan.Linda@epa.gov]; Carlson, Rachel [Carlson.Rachel@epa.gov]; Lawrence, Patty - NRCS, Washington, DC [Patty.Lawrence@wdc.usda.gov]; Freeman, Tamara [Freeman.Tamara@epa.gov]; Aspy, Dale [Aspy.Dale@epa.gov]; Bassett, Jay [Bassett.Jay@epa.gov]; Bingham, Kimberly [Bingham.Kimberly@epa.gov]; Cheeks, Thornell [Cheeks.Thornell@epa.gov]; Davis, Molly [Davis.Molly@epa.gov]; Davis, Scott [Davis.ScottR@epa.gov]; Fifadara, Dipesh [Fifadara.Dipesh@epa.gov]; Gillam, Rick [Gillam.Rick@epa.gov]; Huey, Joel [Huey.Joel@epa.gov]; Johnston, Jon [Johnston.Jon@epa.gov]; Laycock, Kelly [Laycock.Kelly@epa.gov]; Newbold, Amy [Newbold.Amy@epa.gov]; Powell, Alan [Powell.Alan@epa.gov]; Strange, Joel [Strange.Joel@epa.gov]; Thomas, Chris [Thomas.Chris@epa.gov]; Webster, James [Webster.James@epa.gov]; Wylie, Mike [Wylie.Mike@epa.gov]; Echeverria, Marietta [Echeverria.Marietta@epa.gov]; Goodis, Michael [Goodis.Michael@epa.gov]; Ziobro, Joseph [Ziobro.Joseph@epa.gov]; Melnick, Rachel - NIFA [RMelnick@nifa.usda.gov]; Helder, Dirk [Helder.Dirk@epa.gov]; Murphy, Jim [Murphy.Jim@epa.gov]; Sands, Jeffrey [sands.jeffrey@epa.gov]; Jennings, Kim [Jennings.Kim@epa.gov]; Jacob, Sicy [Jacob.Sicy@epa.gov]; Sanzone, Stephanie [Sanzone.Stephanie@epa.gov]

CC: Oberley, Gregory [Oberley.Gregory@epa.gov]; Margaret Jones [Jones.Margaret@epa.gov]; Sonam Gill [gill.sonam@epa.gov]; Ellington, Natalie [Ellington.Natalie@epa.gov]; Wirth, Karen [Wirth.Karen@epa.gov]; Watson, Jane [watson.jane@epa.gov]; Dwyer, Stacey [Dwyer.Stacey@epa.gov]; Ruiz, Thomas [Ruiz.Thomas@epa.gov]; Cooper, WilliamF [Cooper.WilliamF@epa.gov]; Kaspar, Paul [kaspar.paul@epa.gov]; Hamilton, Denise [hamilton.denise@epa.gov]; Eric Nystrom (nystrom.eric@epa.gov) [nystrom.eric@epa.gov]; Sidrah Khan (khan.sidrah@epa.gov) [khan.sidrah@epa.gov]; Jones, Kristin [jones.kristin@epa.gov]; Foreman, Katherine [Foreman.Katherine@epa.gov]; Nitsch, Chad [Nitsch.Chad@epa.gov]; Drake, Kerry [Drake.Kerry@epa.gov]; TENBROOK, PATTI [tenbrook.patti@epa.gov]; Dominy, Randy [dominy.randy@epa.gov]; FertikEdgerton, Rachel [FertikEdgerton.Rachel@epa.gov]; Lane, Willie [Lane.Willie@epa.gov]; Honker, William [honker.william@epa.gov]; Lawrence, Rob [Lawrence.Rob@epa.gov]; Argyropoulos, Paul [Argyropoulos.Paul@epa.gov]; Molloy, Jennifer [molloy.jennifer@epa.gov]; Chu, Karen [Chu.Karen@epa.gov]; Williams, Bo (James) [Williams.James@epa.gov]; Schaeffer, Blake [Schaeffer.Blake@epa.gov]; Greene, Rick [Greene.Rick@epa.gov]; Chan, Janice [Chan.Janice@epa.gov]; Morant, Mervalin - NIFA [MMorant@nifa.usda.gov]; Berg, ElizabethG [Berg.ElizabethG@epa.gov]; Culver, Edison [Culver.Edison@epa.gov]; Hubbard, Joseph [Hubbard.Joseph@epa.gov]; Crocker, Philip [crocker.philip@epa.gov]; Garcia, David [Garcia.David@epa.gov]; Abshire, Andrea [Abshire.Andrea@epa.gov]; Bailley, Treasure [bailley.treasure@epa.gov]; Basile, Alfred [Basile.Alfred@epa.gov]; Hutchinson, Marcella [Hutchinson.Marcella@epa.gov]; Ismert, Peter [Ismert.Peter@epa.gov]; Kleeman, Gary [Kleeman.Gary@epa.gov]; Monahan, Peter [Monahan.Peter@epa.gov]; Pfeiffer, Tricia [Pfeiffer.Tricia@epa.gov]; Steinhaus, Eric [Steinhaus.Eric@epa.gov]; Truskowski, Brent [truskowski.brent@epa.gov]; Canino, Richard [Canino.Richard@epa.gov]; Delapuente, Alejandro [adelapue@nsf.gov]; Wooster, Richard [Wooster.Richard@epa.gov]; Kensinger, Justin [kensinger.justin@epa.gov]; Ortiz, Eduardo [Ortiz.Eduardo@epa.gov]; Restivo, Angela [Restivo.Angela@epa.gov]; Reinhart, Jill - NRCS, Indianapolis, IN [jill.reinhart@in.usda.gov]; Wooster-Brown, Catherine [Wooster-Brown.Catherine@epa.gov]; Jones, Margaret [jones.margaret@epa.gov]; McDonald, Holly [mcdonald.holly@epa.gov]; Rivera-Lupianez, Ana [Rivera-Lupianez.Ana@epa.gov]; Gill, Sonam [Gill.Sonam@epa.gov]; Rea, Anne [Rea.Anne@epa.gov]; Hayes, Mark [hayes.mark@epa.gov]; Quinn, Wilonda [quinn.wilonda@epa.gov]; Thompson, Craig [Thompson.Craig@epa.gov]; Cashdollar, Jennifer

[Cashdollar.Jennifer@epa.gov]; Johnston, JohnM [Johnston.JohnM@epa.gov]; Muche, Muluken [muche.muluken@epa.gov]; Sharpe, Kristinn [Sharpe.Kristinn@epa.gov]; Corona, Elizabeth [Corona.Elizabeth@epa.gov]; Tapia, Cecilia [Tapia.Cecilia@epa.gov]; Cassel, Cynthia [Cassel.Cynthia@epa.gov]; DeLong, Tiffany [delong.tiffany@epa.gov]; Chandler, Joe [Joe.Chandler@fema.dhs.gov]; Tilley, Amber [Tilley.Amber@epa.gov]; Wolfe, Michelle [Michelle.Wolfe@fema.dhs.gov]; Tapp, Joshua [Tapp.Joshua@epa.gov]; Mehl, Hollis [Mehl.Hollis@epa.gov]; Blank, Valerie [Blank.Valerie@epa.gov]

Subject: Agenda Attached: Monthly Ag Issues Forum Call - Recurring Scheduler
Location: Ex. 6 Conference line: Ex. 6, code Ex. 6

Start: 11/2/2017 6:30:00 PM
End: 11/2/2017 8:00:00 PM
Show Time As: Busy

Recurrence: (none)
the fourth Thursday of every 1 month(s) from 1:30 PM to 3:00 PM

Update 10/27/2017

Hello Everyone,

Attached is the agenda for the Thursday, November 2 call. There may be slides coming next week.

I am out of the office next week so Carol Galloway will be leading the call.

In addition to the ORD topic regarding recent and ongoing research on Kansas fishes -- They are looking for information from our group on any data that is available that might assist them in their research – agenda topics include:
-- An update from Jeff Sands, the new Advisor to the Administrator for Ag Policy
-- CERCLA and EPCRA reporting of air emissions from farms
-- new Air BMP document

If you have any questions, please contact Carol.

Thanks!
Ginah

Update

Hello Everyone,

There are conflicts with the October 26 call, so I am moving the call to Thursday, November 2, from 2:30 – 4pm ET.

For the November 2 call we will use an Adobe connect:
Adobe connect url (click on the conference link and enter with your First and Last name as a guest):
Ex. 6

Conference line: Ex. 6, then enter the conference code: Ex. 6

Please Note: Audio from the conference line will be broadcast both by telephone and by computer via Adobe Connect. If you plan to participate by phone, please mute your computer speakers prior to the seminar to avoid feedback.

The agenda and some slides for a presentation by ORD will be sent as we get closer to the date for the call.

One of the topics for the call: ORD will discuss recent and ongoing research on Kansas fishes. They are looking for information from our group on any data that is available that might assist them in their research.
This research uses the Water Quality Portal (WQP) to access data. This data was collected by multiple agencies. USGS data comes from the NWIS database and EPA data comes from the STORET database. However, water quality, stream habitat, and fish community data are limited. Any water quality data including dissolved solids, conductivity, dissolved oxygen, and pesticide (atrazine,2,4-D, bifenthrin, etc.) and stream habitat (substrate type) information will improve the research extent and quality. Any stream water quality data will be appreciated.

Please forward this scheduler to others from your program who might be interested in this topic or have information on potential data sources.

Thanks!
Ginah

Hello Everyone,

This is a new recurring scheduler for the monthly Ag Issues Forum conference calls. Please accept this invitation in order to have these calls added to your calendar; you can then decline individual calls as necessary.

Call-in numbe Ex. 6 Ex. 6

Suggestions for agenda topics are always welcome!

Background about the Ag Issues Forum calls:
EPA's National Ag Center sponsors monthly calls focusing on ag issues the fourth Thursday of every month from 2:30 – 4pm ET. Participants in the calls include EPA HQ and Regional staff interested in ag issues and reps from USDA and USGS.

Thanks!

Ginah
913-551-5028

EPA's Ag Center
http://www.epa.gov/agriculture

Appointment

From: Subramanian, Hema [Subramanian.Hema@epa.gov]
Sent: 2/14/2018 9:50:07 PM
To: Subramanian, Hema [Subramanian.Hema@epa.gov]; Sands, Jeffrey [sands.jeffrey@epa.gov]

Subject: Minor Crop Farmers Alliance Annual Meeting
Attachments: MCFA Agenda -- 02202018.docx; NAFTA TWG Call Agenda.pdf; Workshop Agenda.docx
Location: McDermott, Will & Emery - 500 North Capitol Street, NW

Start: 2/21/2018 4:30:00 PM
End: 2/21/2018 5:30:00 PM
Show Time As: Tentative

I am attaching their meeting agendas here in case you'd like background/context on their meeting.

POC:

Daniel A. Botts
Vice President Industry Resources
Florida Fruit & Vegetable Association
Cell Phone: Ex. 6
Email Address: daniel.botts@ffva.com

Use of Monitoring Data in Pesticide Re-evaluation Work Shop

Wednesday, February 21, 2018

1:30 pm -- 4:30 pm

McDermott Building, Senate Conference Room

500 North Capitol Street, NW
Washington, DC 20001

Purpose of the meeting

To establish a common understanding of process and policies to drive the use of monitoring data in the pesticide revaluation process; MCFA asked EPA to provide a workshop on the issues and objectives that will be presented in the white paper under development for discussion by the Science Advisory Panel in the future. We are especially interested in the types and quality of data that is being considered and how it will be used. What considerations are being made regarding current models on the need to revise if monitoring data is used? How will temporal impacts of specific compound use be considered or included in the process? How industry generated information may be used to inform the decision process?

Participation

MCFA Technical Committee
MCFA Support Contact List
EPA OPP (EFED)

Proposed Agenda

- Introductions/Overview (10 Minutes)
- EPA Presentations (90 Minutes +/-)
  - Overview of DWA Process
  - Surface Water and Ground Water Modeling
    - Tiered Refinement Process
  - Quantitative and Qualitative Use of Monitoring Data
  - Efforts related to Monitoring SAP
  - Specific Data Needs from Specialty Crops
  - Future Advances in Drinking Water Assessments
- Q & A/Discussion (60 Minutes +/-)

Appointment

From: Subramanian, Hema [Subramanian.Hema@epa.gov]
Sent: 1/8/2018 10:12:47 PM
To: Subramanian, Hema [Subramanian.Hema@epa.gov]; Sands, Jeffrey [sands.jeffrey@epa.gov]; kharris@corn.org; maxwilliamson@williamsonlawpolicy.com

Subject: Corn Refiners Association meeting w/Jeff Sands
Location: William Jefferson Clinton Building North - Room 2415-A. 1200 Pennsylvania Ave. NW Washington, DC 20004

Start: 1/17/2018 8:00:00 PM
End: 1/17/2018 9:00:00 PM
Show Time As: Busy

EPA contact information: Hema Subramanian, 202-564-5041 / Jeff Sands, 202-564-2263

Directions and Visitor Entry Procedures (PLEASE READ PRIOR TO ARRIVAL):

Please send Hema Subramanian (Subramanian.hema@epa.gov) a list of names of non-federal visitors **two days prior to the meeting**, and arrive 15 minutes prior to your appointment to allow time for security screening and escort to the meeting room.

Metro stop: Federal Triangle

Although our street address is 1200 Pennsylvania Avenue, the main entrances for visitors to William Jefferson Clinton **North** building are not along Pennsylvania Avenue. Enter the **North** building via doors to the right of the Federal Triangle Metro exit escalators (when exiting the Metro and facing Woodrow Wilson Plaza). For more details and a map: https://www.epa.gov/aboutepa/visiting-epa-headquarters

Non-federal visitors will need to go through metal detectors and provide the security desk:

- your REAL ID Act-compliant identification
- EPA contact information (Hema Subramanian, 202-564-5041 / Jeff Sands, 202-564-2263)
- destination room (William Jefferson Clinton North Building Room 2415-A)

Security will call Jeff to sign you in and escort you to the room. For details on security and ID requirements, see: https://www.epa.gov/aboutepa/visiting-epa-headquarters

Appointment

From: Atkinson, Emily [Wehrum.Bill@epa.gov]
Sent: 12/15/2017 1:47:45 PM
To: Wehrum, Bill [Wehrum.Bill@epa.gov]; Gunasekara, Mandy [Gunasekara.Mandy@epa.gov]; Orlin, David [Orlin.David@epa.gov]; Hengst, Benjamin [Hengst.Benjamin@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]; Sands, Jeffrey [sands.jeffrey@epa.gov]
CC: Argyropoulos, Paul [Argyropoulos.Paul@epa.gov]

Subject: Meet with RFA (Bob Dinneen) and Growth Energy (Emily Sklor) re: possible waiver (Confirmed)
Attachments: Confirmed 1/3/2018 at 3pm: request - Meet with RFA and Growth Energy; attendees
Location: WJC-N 5400 + Video with AA + Ex. 6 Participant Code: Ex. 6

Start: 1/3/2018 8:00:00 PM
End: 1/3/2018 8:30:00 PM
Show Time As: Busy

To: Bill Wehrum, Mandy Gunasekara, David Orlin, Ben Hengst, Chris Grundler, Erik Baptist, Jeff Sands
Outside Attendees (in person):
Renewable Fuels Association

- Bob Dinneen
- Matt Morrison
- Bryan Stockton

Growth Energy

- Shailesh Sahay
- Emily Sklor
- John Fure
- Chris Bliley
- Jonathan Martel

American Coalition for Ethanol

- Jonathon Lehman

National Corn Growers Association

- Kathy Bergren

Urban Air Initiative

- Andy Varcoe
- Adam Gustafson

Biotechnology Industries Organization

- Kristin Landis
- Erick Lutt

Confirmed 1/3/2018 at 3pm:... attendees

Message

From: Michael McKenna [mike@mwrstrat.com]
Sent: 1/3/2018 3:41:38 PM
To: Atkinson, Emily [Atkinson.Emily@epa.gov]
Subject: attendees

Emily -

sorry about the ridiculous number. This is evidently a very popular meeting.

MM

>
> Renewable Fuels Association
> Bob Dinneen
> Matt Morrison
> Bryan Stockton
>
> Growth Energy
> Shailesh Sahay
> Emily Sklor
> John Fure
> Chris Bliley
> Jonathan Martel
>
> American Coalition for Ethanol
> Jonathon Lehman
>
> National Corn Growers Association
> Kathy Bergren
>
> Urban Air Initiative
> Andy Varcoe
> Adam Gustafson
>
> Biotechnology Industries Organization
> Kristin Landis
> Erick Lutt
>

Appointment

From: Beck, Nancy [Beck.Nancy@epa.gov]
Sent: 11/21/2017 1:34:14 PM
To: Beck, Nancy [beck.nancy@epa.gov]; Keaney, Kevin [Keaney.Kevin@epa.gov]; Fitz, Nancy [Fitz.Nancy@epa.gov]; Davis, Kathy [Davis.Kathy@epa.gov]; Keigwin, Richard [Keigwin.Richard@epa.gov]; Kasai, Jeanne [Kasai.Jeanne@epa.gov]; Rivera-Lupianez, Ana [Rivera-Lupianez.Ana@epa.gov]; Pont, Richard [Pont.Richard@epa.gov]; Miller, Wynne [Miller.Wynne@epa.gov]; Kiely, Timothy [Kiely.Timothy@epa.gov]; Wyatt, TJ [Wyatt.Tj@epa.gov]; Berwald, Derek [Berwald.Derek@epa.gov]; Garrison, Scott [Garrison.Scott@epa.gov]; Perlis, Robert [Perlis.Robert@epa.gov]; Parrott, Patricia [parrott.patricia@epa.gov]; Arling, Michelle [Arling.Michelle@epa.gov]; Dinkins, Darlene [Dinkins.Darlene@epa.gov]; Keller, Kaitlin [keller.kaitlin@epa.gov]; Bolen, Derrick [bolen.derrick@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]; Park, Jennifer [park.jennifer@epa.gov]; Smith, Peterj [Smith.Peterj@epa.gov]; Mclean, Kevin [Mclean.Kevin@epa.gov]; Baptist, Erik [Baptist.Erik@epa.gov]; Lee, Andrew [Lee.Andrew@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Peffers, Mel [Peffers.Mel@epa.gov]; Sands, Jeffrey [sands.jeffrey@epa.gov]; Hughes, Hayley [hughes.hayley@epa.gov]; Hofmann, Angela [Hofmann.Angela@epa.gov]
CC: Wise, Louise [Wise.Louise@epa.gov]; Hoyt, Sarita [Hoyt.Sarita@epa.gov]; Nelson, Tomeka [Nelson.Tomeka@epa.gov]; Strauss, Linda [Strauss.Linda@epa.gov]; Reighart, Andrew [Reighart.Andrew@epa.gov]; Yarger, Ryne [Yarger.Ryne@epa.gov]; Messina, Edward [Messina.Edward@epa.gov]; Anderson, Neil [Anderson.Neil@epa.gov]; Epp, Timothy [Epp.Timothy@epa.gov]

Subject: Canceled: WPS & C&T Meeting
Attachments: Untitled Attachment; Untitled Attachment; Untitled Attachment; Untitled Attachment; Untitled Attachment; Untitled Attachment; Untitled Attachment; WPS & C&T Meeting Options Selection pre-brief; Untitled Attachment; Untitled Attachment; Canceled: WPS & C&T Meeting ; Untitled Attachment; Untitled Attachment; Untitled Attachment; Canceled: WPS & C&T Meeting ; Untitled Attachment; Canceled: WPS & C&T Meeting ; Canceled: WPS & C&T Meeting ; Untitled Attachment; Canceled: WPS & C&T Meeting ; Untitled Attachment; Untitled Attachment; Untitled Attachment
Location: PY-S4621; (Call in number Ex. 6, access code Ex. 6

Start: 11/21/2017 9:00:00 PM
End: 11/21/2017 9:30:00 PM
Show Time As: Free

Importance: High

Recurrence: Weekly
every Tuesday from 4:00 PM to 4:30 PM

Draft Schedule for Revising the WPS and Certification Rule (12/4/17)

This is an initial schedule to revise the WPS requirements for minimum age, designated representative and application exclusion zone and the certification minimum age requirements. Some relevant assumptions and questions include:

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-
-
-
-
-

Ex. 5 Deliberative Process (DP)

Date	Actions: Issue notice and comment rulemaking to address 3 topics in WPS and one topic in the Certification rule.

Ex. 5 Deliberative Process (DP)

Appointment

From: Sands, Jeffrey [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=B2AA28629ADE4AFB8D5EC12A8AAABA54-SANDS, JEFF]
Sent: 11/6/2017 9:56:57 PM
To: Sands, Jeffrey [sands.jeffrey@epa.gov]

Subject: MO Corn call

Start: 11/9/2017 3:30:00 PM
End: 11/9/2017 4:00:00 PM
Show Time As: Busy

Appointment

From: Ziobro, Joseph [Ziobro.Joseph@epa.gov]
Sent: 10/19/2017 9:48:33 PM
To: Ziobro, Joseph [Ziobro.Joseph@epa.gov]; kim@aginspirations.com; donp@fb.org; danielleq@fb.org; tom.hebert@bayardridge.com; Chad.Frahm@rosedmi.com; John.Monaghan@dairy.org; karen.scanlon@dairy.org; syager@beef.org; apeterson@chickenusa.org; kbillings@ncfc.org; lvandoren@ncfc.org; cdetlefsen@nmpf.org; Michael Formica [formicam@nppc.org]; dwells@turkeyfed.org; cgarrison@garrisongroup.com; pbredwell@poultryegg.org; crichter@thepolicygroup.com; Ex. 6 kwesterbeek@smithfield.com; cal@creightonbrothersllc.com; billk@cooperfarms.com; jamie.burr@tyson.com; cousercattle@iowatelecom.net; iowariverranch@heartofiowa.net; tom.mcdonald@jbssa.com; rholladay@cmfoods.com; tmbass@montana.edu; mrisse@uga.edu; Glenn Carpenter [glenn.carpenter@wdc.usda.gov]; gary.kelman@maryland.gov; Woodmansey, Kent [Kent.Woodmansey@state.sd.us]; Ferris, Lena [Ferris.Lena@epa.gov]; Sawyers, Andrew [Sawyers.Andrew@epa.gov]; Brennan, Ross [Brennan.Ross@epa.gov]; Molloy, Jennifer [molloy.jennifer@epa.gov]; Subramanian, Hema [Subramanian.Hema@epa.gov]; Jones, Kristin [jones.kristin@epa.gov]; Best-Wong, Benita [Best-Wong.Benita@epa.gov]; Wall, Tom [Wall.Tom@epa.gov]; Pollins, Mark [Pollins.Mark@epa.gov]; Theis, Joseph [Theis.Joseph@epa.gov]; Shenk, Kelly [shenk.kelly@epa.gov]; Robertson, Duane [Robertson.Duane@epa.gov]; Winn, G. Dean [winn.gerald@epa.gov]; Socha, Julianne [socha.julianne@epa.gov]; Burdett, Cheryl [burdett.cheryl@epa.gov]; Rush, Randall [Rush.Randall@epa.gov]; Saunders, Jerry [Saunders.Jerry@epa.gov]; Hamilton, Denise [Hamilton.Denise@epa.gov]; Cooper, WilliamF [Cooper.WilliamF@epa.gov]; Galloway, Carol [Galloway.Carol@epa.gov]; Perrin, Rebecca [Perrin.Rebecca@epa.gov]; Miller, Amy [Miller.Amy@epa.gov]; Mitschele, Becky [Mitschele.Becky@epa.gov]; Peak, Nicholas [Peak.Nicholas@epa.gov]; bhammerich@coloradolivestock.org; Winnett, Steven [winnett.steven@epa.gov]; Heinemann, Kristina [Heinemann.Kristina@epa.gov]; Flournoy, Karen [Flournoy.Karen@epa.gov]; Hall, Lynda [Hall.Lynda@epa.gov]; Larsen, Erika [Larsen.Erika@epa.gov]; Mortensen, Ginah [mortensen.ginah@epa.gov]; Greg Zwicke [greg.zwicke@ftc.usda.gov]; mhart@beef.org; LUEHE, DOUGLAS [luehe.douglas@epa.gov]; aneuhart@BrwnCald.com; MSponsler@coloradocorn.com; justin.miller@jbssa.com; brad.lubbers@jbssa.com; ben@tcfa.org; empiredairy@me.com; jslutsky@lalunadairy.com; Sandy.Means@gnb.usda.gov; lisa.devore@state.co.us; Sands, Jeffrey [sands.jeffrey@epa.gov]; jim_cheatham@nps.gov; Jimmy.Bramblett@wdc.usda.gov; Hosch, Claudia [hosch.claudia@epa.gov]
CC: Paul Bredwell [pbredwell@uspoultry.org]; Frahm, Chad [Chad.Frahm@dairy.org]; Hou, James [Hou.James@epa.gov]; Ismert, Peter [Ismert.Peter@epa.gov]; Chad DeVolin [chad.devolin@state.co.us]; Magruder, DeMara [Magruder.Demara@epa.gov]; Denton, Loren [Denton.Loren@epa.gov]; Ex. 6 Ashley McDonald [amcdonald@beef.org]; Zobrist, Marcus [Zobrist.Marcus@epa.gov]; Nitsch, Chad [Nitsch.Chad@epa.gov]; jeffrey.porter@gnb.usda.gov; jayolsen@utah.gov; Sharpe, Kristinn [Sharpe.Kristinn@epa.gov]; Corona, Elizabeth [Corona.Elizabeth@epa.gov]; Jill Heemstra [jill.heemstra@unl.edu]; Rathbone, Colleen [Rathbone.Colleen@epa.gov]; Gioffre, Patricia [Gioffre.Patricia@epa.gov]; Jennings, Kim [Jennings.Kim@epa.gov]; Greenwald, Kathryn [Greenwald.Kathryn@epa.gov]; Rise, David [rise.david@epa.gov]; Bahk, Benjamin [Bahk.Benjamin@epa.gov]

Subject: Animal Agriculture Discussion Group Meeting
Attachments: AADG Oct 2017 Denver Mtg_Final Agenda.pdf; AADG Oct 2017 Denver Mtg_Participants List final.pdf; Berkshire AADG Dinner Menu.pdf
Location: 3203 Quebec St, Denver, CO 80207

Start: 10/23/2017 7:30:00 PM
End: 10/25/2017 9:30:00 PM
Show Time As: Busy

Animal Agriculture Discussion Group Meeting, Denver Colorado – Oct. 23 – 25, 2017

Dear Animal Agriculture Discussion Group:

We look forward to seeing you next week in Colorado. Attached are the following:

- Final Agenda, with webcast/teleconference and logistical information
- Participants list (with RSVPs as of 10/19 morning)
- Menu for dinner on Tuesday the 24th

Please note that the times of some sessions in the agenda have shifted slightly.

Onsite Contacts:

Kelly Shenk, Agricultural Advisor, EPA Region 4: shenk.kelly@epa.gov, (cell) Ex. 6
Ross Brennan, Acting Chief of EPA Rural Branch: Brennan.ross@epa.gov, (cell) Ex. 6

Thank you.

- **Hotel and Meeting Location**: Doubletree by Hilton Hotel Denver, 3203 Quebec St, Denver, CO 80207 – **Grand Ballroom IV** (*not Grand "Ballroom I" as listed on the agenda*)

- **Transportation from/to Airport**:
    - Train – The RTD University of Colorado A Line train runs from Denver Airport to Central Park Station for $9 each way, and the hotel provides a complimentary shuttle from the station (call the hotel at 303-321-3333 when you arrive at the platform to request shuttle).Info at: http://www.rtd-denver.com/a-line.shtml
    - Uber - $23-30 each way; Taxi - Approximately $55 each way

- **Tours:** Oct. 25
    - Stop 1: Empire Dairy, Wiggins, CO
    - Stop 2: JBS/Five Rivers Cattle Feeding, Kersey, CO
    - Transportation (charter bus) will be provided from meeting location to tour stops and back.

- **Meals:** Per federal policies, EPA is restricted from providing refreshments for this meeting. However, the hotel has cafés and restaurants with food and beverages available for purchase, both onsite and nearby. We will also select locations for some group meals as indicated in the agenda, so please indicate which meeting sections/meals you plan to attend on the registration website, so we can ensure capacity. Boxed lunches with sandwiches/wraps will be pre-ordered for the Wednesday tour, so please also indicate in your registration **by September 23rd** if you have any special dietary preferences or restrictions for this meal. Federal employees should to bring cash if interested in participating in the boxed lunch (amount will be announced soon).

- **Telephone and Web-Conference Information:**

    - **Phone Conference Line for Audio**: Dial Ex. 6, Passcode Ex. 6

- **Adobe Webcast Link:** Ex. 6

For additional information, please contact Subramanian.hema@epa.gov or Ziobro.joseph@epa.gov

Animal Agriculture Discussion Group
October 23-25, 2017 Meeting
Denver Area, Colorado
Agenda and Logistical Information *(Final)*

Meeting and Hotel Location:

Doubletree by Hilton Hotel Denver
3203 Quebec St., Denver, CO 80207
Grand Ballroom I
Website
Map

Note: There are multiple DoubleTree hotels in close proximity on this same road. Be sure to use the street address to identify the correct location: **3203 Quebec St., Denver, CO 80207**.

Transportation from Airport:

Train – The RTD University of Colorado A Line train runs from Denver Airport to Central Park Station for $9 each way, and the hotel provides a complimentary shuttle from the station (call the hotel at 303-321-3333 when you arrive at the platform to request shuttle).
Info at: http://www.rtd-denver.com/a-line.shtml

Uber - $23-30 each way; ***Taxi*** - Approximately $55 each way

Dress Code: Business casual for the meetings Monday and Tuesday. Outdoor-friendly clothes (boots, jacket/layers, etc.) for the farm tours on Wednesday.

Meals/Refreshments:

Per federal policies, please note that EPA is restricted from providing refreshments for this meeting. However, the hotel has cafés and restaurants with food and beverages available for purchase, both onsite and within walking distance.

Breakfasts and Mon/Tue lunches will be on your own.

Boxed lunches have been pre-ordered to be catered on Wednesday during the tour; federal employees should bring cash to cover the cost of their lunches on this day (amount will be announced).

An optional networking dinner will be located at the Berkshire Restaurant on Tuesday evening, within 10 minutes walking distance of the hotel. The restaurant is offering a special/limited menu for our dinner, which is attached to the calendar invitation.

Onsite Contacts:

Kelly Shenk, Agricultural Advisor, EPA Region 4: shenk.kelly@epa.gov, (cell) Ex. 6
Ross Brennan, Acting Chief of EPA Rural Branch: Brennan.ross@epa.gov, (cell) Ex. 6

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Webcast Information (for 10/23 and 10/24):

Link: Ex. 6

Phone Conference Line for Audio: Dial Ex. 6 Passcode Ex. 6

Adobe Connect Webcast Instructions

Use this link to access visual presentations: Ex. 6

Audio will be available only by phone conference line: **Dial** Ex. 6 **Passcode** Ex. 6

If you have never attended an Adobe Connect meeting before:

Test your connection: http://epawebconferencing.acms.com/common/help/en/support/meeting_test.htm
Get a quick overview: http://www.adobe.com/products/adobeconnect.html

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Final Agenda

Monday, October 23 - MEETING, DAY 1

Morning flights in, lunch on your own

1:30 pm 2:00 – 2:15 pm	Arrivals (Grand Ballroom I) **Introductions**
2:15 – 2:40 pm	**Welcome, Preliminary Remarks** - *Doug Benevento, EPA R8 Regional Administrator (tentative)* - *Don Brown, Colorado Department of Agriculture Commissioner*
2:40 – 2:50 pm	**Vision for the Meeting, General Updates, Announcements** - *Hema Subramanian, EPA Water Permits Division/Rural Branch*
2:50 – 3:30 pm	**Regional Spotlight: Animal Agriculture and Collaboration in Colorado** • **Colorado Monitoring Framework - Agricultural Task Force** http://coloradolivestock.org/agricultural-task-force/ - *Andrew Neuhart, Brown and Caldwell and Mark Sponsler, Colorado Corn*
3:30 – 3:40 pm	*Break*
3:40 – 4:40 pm	• **Rocky Mountain National Park Initiative** https://www.nature.nps.gov/air/Permits/ARIS/docs/romoNFactSheetV11200505Final.pdf http://www.rmwarmingsystem.com/ - *Bill Hammerich, Colorado Livestock Association* - *James Hou, EPA Region 8 Air Program* - *Justin Miller, JBS Five Rivers Cattle Feeding* - *John Slutsky, La Luna Dairy* - *Lisa Devore, Colorado Department of Public Health and Environment*
4:40 – 5:15 pm	***What can we learn from these local/regional models that could help inform the direction of the AADG?*** - *Discussion led by Kelly Shenk, EPA Region 3 Agricultural Advisor*
5:15 – 5:30 pm	**Re-cap, Wrap up, and Logistics Ahead** - *Hema Subramanian, EPA Water Permits Division/Rural Branch*

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Tuesday, October 24th - MEETING, DAY 2

8:15 – 8:30 am	**Welcome back** - *Remarks by Andrew Sawyers, EPA Office of Wastewater Management Director and Marcus Zobrist, EPA Office of Wastewater Management - Water Permits Division Acting Director* - *Introduction of Jeffrey Sands, EPA Senior Advisor to the Administrator for Agriculture Policy*
8:30 – 8:45 am	**EPA Agency Updates**
8:45 – 9:00 am	**EPA's Smart Sectors Program** https://www.epa.gov/smartsectors - *Kristinn Sharpe, EPA Office of Policy, Smart Sectors, Agriculture Lead* - *Elizabeth Corona, EPA Office of Policy, Smart Sectors, Agriculture Backup Lead*
9:00 – 9:15 am 9:15 – 10:00 am	**Updates on Ongoing Collaborations** • **Animal Ag Education Project** ○ **Updates since launch of EPA Overview Module** Website: https://articles.extension.org/pages/73649/animal-agriculture-manure-management-and-water-quality - *Kelly Shenk, EPA Region 3 Agricultural Advisor* ○ **NRCS module preview and discussion** Links to draft module *(please do not share yet beyond this group)*: Section 1: https://articles.extension.org/preview/page/create/102424 Section 2: https://articles.extension.org/preview/page/create/102577 - *Glenn Carpenter, USDA NRCS Animal Husbandry National Leader*
10:00 – 10:10 am	*Break*
10:10 – 10:30 am 10:30 – 11:00 am 11:00 – 11:15 am	○ **National Cattlemen's Beef Association's module preview and discussion** - *Scott Yager, National Cattlemen's Beef Association* ○ **U.S. Poultry & Egg Inspection/Conservation module preview and discussion** - *Paul Bredwell, U.S. Poultry & Egg Association* ○ **Next steps for the Animal Ag Education Project**

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11:15 – 11:45 am	• **Nutrient Recycling Challenge update** - *Joseph Ziobro, Hema Subramanian, and Kristin Jones, EPA Water Permits Division/Rural Branch*
11:45 – 1:15 pm	*Lunch on your own*
1:15 – 2:30 pm	**Findings from EPA and State Water Quality Permitting Inspections** - *Carol Galloway, EPA Office of Compliance and National Agriculture Center*
2:30 – 3:00 pm 3:00– 3:20 pm	**Industry-led sustainability initiatives** • **Featured initiative: U.S. Roundtable on Sustainable Beef** https://www.usrsb.org/ - *Ashley McDonald, National Cattlemen's Beef Association* **Brief updates on other industry sustainability initiatives**
3:20 – 3:30 pm	*Break*
3:30 – 5:00 pm	**Working session on next steps for the AADG, ways to build on its success** • Breakout discussions (45 mins) – *webcast will break* • Re-convene to map out vision (45 mins) – *webcast will resume*
5:00 – 5:15 pm	**Wrap-up, Takeaways, Action Items** **Closing Remarks, Adjourn**
6:00 – 7:30 pm	*Optional networking dinner* **The Berkshire** 7352 29th Ave. Denver, CO 80238 Directions: Walk 0.3 miles south on Quebec St. from the hotel, turn left on 29th St. Restaurant will be on the right.

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Wednesday, October 25th – TOUR DAY

(There will be no webcast for this day.)

7:15 am	**Board bus, travel to Empire Dairy**
9:00 – 10:30 am	**Empire Dairy** Wiggins, CO
10:30 – 11:00	**Travel to JBS/Five Rivers**
11:00 am – 1:30 pm	**JBS/Five Rivers Cattle Feeding** Kersey, CO *Boxed lunches will be provided onsite.*
3:00 pm	**Arrive back at hotel**

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Animal Agriculture Discussion Group
October 23-25, 2017 Meeting
Denver Area, Colorado
Participants List

Y - accepted calendar invite, T - tentative, N - declined, P - Phone — *Tallies below include Yes and Tentative*

First Name	Last Name	Affiliation	New/ Guest	RSVP Mtg	RSVP Tue lunch	RSVP Tue dinner	RSVP Tour	Attended
TOTALS				**54**	**43**	**39**	**37**	
Ag Associations/National Orgs				**7**	**5**	**5**	**5**	
Kim	Bremmer	American Agri-Women						
Don	Parrish	American Farm Bureau Federation						
Danielle	Quist	American Farm Bureau Federation		N				
Tom	Hebert	Bayard Ridge Group		P				
Chad	Frahm	Innovation Center for U.S. Dairy / Dairy Management Inc.		T				
John	Monaghan	Innovation Center for U.S. Dairy / Dairy Management Inc.		N				
Karen	Scanlon	Innovation Center for U.S. Dairy / Dairy Management Inc.		Y	Y	T	Y	
Scott	Yager	National Cattlemen's Beef Association		Y	Y	Y	Y	
Mary Thomas	Hart	National Cattlemen’s Beef Association		Y	Y	Y	Y	
Ashley	McDonald	National Cattlemen's Beef Association	Guest	Y	N	N	N	
Ashley	Peterson	National Chicken Council						
Kelsey	Billings	National Council of Farmer Cooperatives		N				
Lisa	Van Doren	National Council of Farmer Cooperatives						
Clay	Detlefsen	National Milk Producers Federation						
Michael	Formica	National Pork Producers Council		N	N	N	N	
Damon	Wells	National Turkey Federation						
Charlie	Garrison	The Garrison Group, LLC						
Paul	Bredwell	U.S. Poultry and Egg Association		Y	Y	Y	Y	
Christian	Richter	The Policy Group		Y	Y	Y	Y	
Steve	George	United Egg Producers						
David	Inall	United Egg Producers						
Producers/Local Contacts				**13**	**11**	**10**	**9**	
Doug	Young	Spruce Haven Farm (NY)		Y	Y	T	Y	
Kraig	Westerbeek	Smithfield (NC)		Y	Y	N	N	
Cal	Jackson	Creighton Brothers (IN)		N				
Bill	Knapke	Cooper Farms (OH)		Y	Y	Y	N	
Jamie	Burr	Tyson Foods (AR)		Y	Y	Y	Y	
Bill	Couser	Couser Cattle Co. (IA)		Y	Y	Y	Y	

First Name	Last Name	Affiliation	New/ Guest	RSVP Mtg	RSVP Tue lunch	RSVP Tue dinner	RSVP Tour	Attended
Dave	Petty	Iowa River Ranch (IA)		Y	Y	Y	Y	
Tom	McDonald	JBS Five Rivers Cattle Feeding LLC (TX)		Y	Y	Y	Y	
Justin	Miller	JBS Five Rivers Cattle Feeding LLC (CO)	Guest	Y	Y	Y	Y	
Brad	Lubbers	JBS Five Rivers Cattle Feeding LLC (CO)	Guest	Y	Y	T	Y	
Ben	Weinheimer	Texas Cattle Feeders Association	Guest	Y	Y	Y	Y	
Bill	Hammerich	Colorado Livestock Association	Guest	Y	Y	T	Y	
Rob	Holladay	Cal-Maine Foods, Inc. (MS)		P				
Norm	Dinis	Empire Dairy (CO)	Guest	Y				
Jon	Slutskey	La Luna Dairy, Inc. (CO)	Guest	Y				
		Academia		**0**	**0**	**0**	**0**	
Thomas	Bass	Montana State University Extension						
Mark	Risse	University of Georgia						
Jill	Heemstra	University of Nebraska Extension/Livestock and Poultry Environmental Learning Center	Guest	P				
		USDA		**3**	**3**	**3**	**3**	
Rafael	Guerrero	USDA NRCS, Deputy Chief for Science & Technology	New					
Glenn	Carpenter	USDA NRCS, Animal Husbandry National Leader		Y	Y	Y	Y	
Jeff	Porter	USDA NRCS, Animal Manure and Nutrient Management Team Leader	Guest	P				
Sandra	Means	USDA NRCS	Guest	Y	Y	Y	Y	
Greg	Zwicke	Colorado NRCS, Air Quality Engineer	Guest	Y	T	T	Y	
		States		**4**	**2**	**1**	**2**	
Gary	Kelman	Maryland Dept. of the Environment		N				
Kent	Woodmansey	South Dakota Dept. of Environment & Natural Resources		N				
Chad	DeVolin	Colorado Department of Public Health and Environment - Environmental Agriculture, Program Coordinator	Guest	Y	Y	N	Y	
Lisa	Devore	Colorado Department of Public Health and Environment	Guest	Y				
Don	Brown	Colorado Department of Agriculture, Commissioner	Guest	Y				
Jay	Olsen	Utah Department of Agriculture and Food	Guest	Y	Y	Y	Y	
		EPA Headquarters		**9**	**10**	**10**	**8**	
Jeffrey	Sands	Office of the Administrator, Senior Advisor to the Administrator for Agriculture Policy	New	Y	Y	Y	N	
Lena	Ferris	Office of the Administrator, Designated Federal Officer to the Farm, Ranch, and Rural Communities Federal Advisory Committee		N				

First Name	Last Name	Affiliation	New/ Guest	RSVP Mtg	RSVP Tue lunch	RSVP Tue dinner	RSVP Tour	Attended
Chad	Nitsch	Office of the Administrator, Intergovernmental Relations | State and Regional Partnerships	New	P				
Benita	Best-Wong	Office of Water, Acting Principal Deputy Assistant Administrator						
Andrew	Sawyers	Office of Water, Office of Wastewater Management, Director		Y	Y	T	N	
Marcus	Zobrist	Office of Water, Office of Wastewater Management, Water Permits Division, Acting Director	New	Y	Y	T	Y	
Ross	Brennan	Office of Water, Office of Wastewater Management, Water Permits Division, Rural Branch, Acting Chief		Y	Y	Y	Y	
Jenny	Molloy	Office of Water, Office of Wastewater Management, Water Permits Division, Environmental Protection Specialist		P				
Hema	Subramanian	Office of Water, Office of Wastewater Management, Water Permits Division, Environmental Protection Specialist		Y	Y	Y	Y	
Joseph	Ziobro	Office of Water, Office of Wastewater Management, Water Permits Division, Physical Scientist		Y	Y	Y	Y	
Kristin	Jones	Office of Water, Office of Wastewater Management, Water Permits Division, ORISE Participant		P				
Tom	Wall	Office of Water, Office of Wetlands, Oceans, & Watersheds, Assessment & Watershed Protection Division, Director						
Mark	Pollins	Office of Enforcement & Compliance Assurance, Water Enforcement Division, Director						
Joe	Theis	Office of Enforcement & Compliance Assurance, Water Enforcement Division, Assoc. Director		N	N	N	N	
Loren	Denton	Office of Enforcement and Compliance Assurance, Water Enforcement Division, Acting Associate Director	New		N	N	N	
Kathy	Greenwald	Office of Enforcement and Compliance Assurance, Water Enforcement Division	Guest					
Carol	Galloway	Office of Enforcement & Compliance Assurance, Office of Compliance, EPA National Agriculture Center		Y	Y	Y	Y	
Ginah	Mortensen	Office of Enforcement & Compliance Assurance, Office of Compliance, EPA National Agriculture Center Director	New	P				
		Office of Policy, Smart Sectors, Agriculture	New	T	T	T	T	
Kristinn	Sharpe	Office of Policy, Smart Sectors, Agriculture	New	T	T	T	T	
Elizabeth	Corona	Office of Policy, Smart Sectors, Agriculture	New	T	T	T	T	
		EPA Regions		**15**	**12**	**10**	**10**	
Steven	Winnett	Region 1, Ag Advisor	New	Y	Y	Y	Y	

First Name	Last Name	Affiliation	New/ Guest	RSVP Mtg	RSVP Tue lunch	RSVP Tue dinner	RSVP Tour	Attended
Kristina	Heinemann	Region 2, Ag Advisor	New	Y	Y	Y	Y	
Kelly	Shenk	Region 3, Ag Advisor, AADG Manager		Y	Y	Y	Y	
Duane	Robertson	Region 4, Ag. Coordinator	New	N	N	N	N	
Gerald	Winn	Region 5, Acting Regional Ag Advisor	New	Y	Y	N	N	
Julianne	Socha	Region 5, Water Division, NPDES Programs Branch		N	N	N	N	
Cheryl	Burdett	Region 5, Water Enforcement, CAFO Program Manager						
Randy	Rush	Region 6, Ag AdvisorPolicy Advisor - Agriculture		N	N	N	N	
Jerry	Saunders	Region 6, Compliance Assurance & Enforcement Division, Water Enforcement Branch, Chief						
Denise	Hamilton	Region 6, Environmental Engineer						
William	Cooper	Region 6, Water Division	New	Y	Y	Y	Y	
Karen	Flournoy	Region 7, Ag Advisor	New	Y	Y	N	N	
Doug	Benevento	Region 8, Regional Administrator	Guest	T				
Rebecca	Perrin	Region 8, Ag Advisor		Y	Y	T	Y	
Colleen	Rathbone	Region 8, Wastewater Unit, Chief		T	T	T	T	
David	Rise	Region 8, CAFOs, Montana Oversight		T	T	T	T	
James	Hou	Region 8, Air Program	Guest	T	T	Y	Y	
Peter	Ismert	Region 8, Environmental Scientist	Guest	T	N	N	N	
		Region 8, Office of Research & Development		T				
Becky	Mitschele	Region 9, NPDES Permits & Water, Ag Coordinator		Y	Y	Y	Y	
Doug	Luehe	Region 9, Acting Chief of Staff/Ag Advisor		N	N	N	N	
Nicholas	Peak	Region 10, Ag Advisor		Y	Y	Y	Y	
Other Guests				**3**	**0**	**0**	**0**	
Andrew	Neuhart	Brown and Caldwell (Colorado Agricultural Task Force)	Guest	Y				
Mark	Sponsler	Colorado Corn (Colorado Agricultural Task Force)	Guest	Y				
Jim	Cheatham	National Park Service, Air Resources Division, Air Quality Specialist	Guest	T				

Appointment

From: Mortensen, Ginah [mortensen.ginah@epa.gov]
Sent: 10/18/2017 9:55:11 PM
To: Mortensen, Ginah [mortensen.ginah@epa.gov]; Adkins, Tabatha [Adkins.Tabatha@epa.gov]; Ager, Sara [Ager.Sara@epa.gov]; Allnutt, David [Allnutt.David@epa.gov]; amend, carol [amend.carol@epa.gov]; Arvizu, Christy [Arvizu.Christy@epa.gov]; Back, Tracy [back.tracy@epa.gov]; Bartenfelder, David [Bartenfelder.David@epa.gov]; Baumgartner, Donald [baumgartner.donald@epa.gov]; Bishop, Debbie [Bishop.Debbie@epa.gov]; Bloom, Judy [Bloom.Judy@epa.gov]; Boos, Gerard [Boos.Gerard@epa.gov]; Bravo, Antonio [Bravo.Antonio@epa.gov]; Breedlove, Dan [Breedlove.Dan@epa.gov]; Brown, Dan [Brown.Dan@epa.gov]; Burchard, Robert [Burchard.Robert@epa.gov]; Burns, Ward [Burns.Ward@epa.gov]; Butler, John [Butler.JohnJ@epa.gov]; Cabrera-Stagno, Valentina [Cabrera-Stagno.Valentina@epa.gov]; Carter-Jenkins, Shakeba [Carter-Jenkins.Shakeba@epa.gov]; Coats, Andrea [Coats.Andrea@epa.gov]; Collins, Jerry [collins.jerry@epa.gov]; Costa, Allison [Costa.Allison@epa.gov]; Daniels, Jason [Daniels.Jason@epa.gov]; DeHaven, Leigh [DeHaven.Leigh@epa.gov]; Downing, Jane [Downing.Jane@epa.gov]; Drake, Wendy [drake.wendy@epa.gov]; Dunkins, Robin [Dunkins.Robin@epa.gov]; Dunlevy, Robert [Dunlevy.Robert@epa.gov]; Dygowski, Laurel [Dygowski.Laurel@epa.gov]; Fenton, Kathleen [Fenton.Kathleen@epa.gov]; Fergusson, Bruce [Fergusson.Bruce@epa.gov]; Figueroa, Zaida [Figueroa.Zaida@epa.gov]; Fisher, Jacqueline [Fisher.Jacqueline@epa.gov]; Fitz, Nancy [Fitz.Nancy@epa.gov]; Flahive, Katie [Flahive.Katie@epa.gov]; Frizzell, Damon [Frizzell.Damon@epa.gov]; Galloway, Carol [Galloway.Carol@epa.gov]; Gargas, Toni [Gargas.Toni@epa.gov]; gfritz@usgs.gov; Gilbert, Neal [Gilbert.Neal@epa.gov]; Gould, Stephen [Gould.Stephen@epa.gov]; Gratz, Jeff [Gratz.Jeff@epa.gov]; Greenwald, Kathryn [Greenwald.Kathryn@epa.gov]; greg.johnson@por.usda.gov; Grier, Gina [Grier.Gina@epa.gov]; Grisier, Mary [Grisier.Mary@epa.gov]; Gunter, Jason [gunter.jason@epa.gov]; Halstead, Amanda [halstead.amanda@epa.gov]; Hamera, Donald [Hamera.Don@epa.gov]; Hart, Debbi [Hart.Debbi@epa.gov]; Heinemann, Kristina [Heinemann.Kristina@epa.gov]; Horak, David [horak.david@epa.gov]; Horchem, Brad [horchem.brad@epa.gov]; Howard, MarkW [Howard.MarkW@epa.gov]; Howland, Sanda [Howland.Sanda@epa.gov]; Hubert, Gayle [Hubert.Gayle@epa.gov]; Hyde, Tinka [hyde.tinka@epa.gov]; Jackson, Robert W. [Jackson.Robertw@epa.gov]; Jacobs, Kira [Jacobs.Kira@epa.gov]; 'jcoles@usgs.gov' [jcoles@usgs.gov]; Johnson, James [Johnson.James@epa.gov]; Kasai, Jeanne [Kasai.Jeanne@epa.gov]; Schefski, Melissa [Schefski.Melissa@epa.gov]; Keaney, Kevin [Keaney.Kevin@epa.gov]; Koethe, Robert [Koethe.Robert@epa.gov]; Krudner, Maureen [Krudner.Maureen@epa.gov]; Kupchan, Simma [Kupchan.Simma@epa.gov]; Lamb, Brad [lamb.brad@epa.gov]; Lancaster, Kris [Lancaster.Kris@epa.gov]; Larsen, Erika [Larsen.Erika@epa.gov]; Lehman, Stuart [Lehman.Stuart@epa.gov]; Lemieux, Paul [Lemieux.Paul@epa.gov]; LEVIN, NANCY [Levin.Nancy@epa.gov]; Longo, Linda [Longo.Linda@epa.gov]; Lubbe, Wendy [Lubbe.Wendy@epa.gov]; MacIntyre, Mark [Macintyre.Mark@epa.gov]; Mahoney, Michele [Mahoney.Michele@epa.gov]; Matthews, Mark [Matthews.Mark@epa.gov]; McCullough, Hugh [McCullough.Hugh@epa.gov]; 'mdraper@nifa.usda.gov' [mdraper@nifa.usda.gov]; Mitschele, Becky [Mitschele.Becky@epa.gov]; Moore, Audrey [Moore.Audrey@epa.gov]; Moses, Althea [Moses.Althea@epa.gov]; Nuhfer, Mark [Nuhfer.Mark@epa.gov]; Olszyk, David [Olszyk.David@epa.gov]; Ostigaard, Crystal [Ostigaard.Crystal@epa.gov]; Peak, Nicholas [Peak.Nicholas@epa.gov]; Perreault, Peg [Perreault.Peg@epa.gov]; Perrin, Rebecca [Perrin.Rebecca@epa.gov]; Peterson, Samuel [Peterson.Samuel@epa.gov]; Phillips, Todd [Phillips.Todd@epa.gov]; Pierce, Troy [Pierce.Troy@epa.gov]; Pinkerton, Kate [Pinkerton.Kate@epa.gov]; Plymale, Chris [Plymale.Christopher@epa.gov]; Pollard, Stephen [Pollard.Stephen@epa.gov]; Pont, Richard [Pont.Richard@epa.gov]; Porter, Donna [Porter.Donna@epa.gov]; Rao, Kate [Rao.kate@epa.gov]; Ridley, Caroline [Ridley.Caroline@epa.gov]; Rise, David [rise.david@epa.gov]; Roberto, Joseph [Roberto.Joseph@epa.gov]; Roberts, Rickey [Roberts.Rickey@epa.gov]; Sampath, Sam [Sampath.Sam@epa.gov]; Sarokin, David [Sarokin.David@epa.gov]; Schademann, Randy [Schademann.Randy@epa.gov]; Schafer, Jeannette [schafer.jeannette@epa.gov]; Schrock, Bill [Schrock.Bill@epa.gov]; Shenk, Kelly [shenk.kelly@epa.gov]; Shields, Amy [Shields.Amy@epa.gov]; 'sjkalkho@usgs.gov' [sjkalkho@usgs.gov]; Socha, Julianne [socha.julianne@epa.gov]; Spaulding, William [spaulding.william@epa.gov]; Sperry, Clint [Sperry.Clint@epa.gov]; Stevenson, Michelle [Stevenson.Michelle@epa.gov]; Stevenson, Suzanne [Stevenson.Suzanne@epa.gov]; Stoy, Alyse [Stoy.Alyse@epa.gov]; Suffian, Fred [Suffian.Fred@epa.gov]; Sullivan, Tim [Sullivan.Tim@epa.gov]; Swackhammer, J-Troy [Swackhammer.J-Troy@epa.gov]; Szylvian, Andrea M. [Szylvian.Andrea@epa.gov]; Tankersley, Julie [Tankersley.Julie@epa.gov]; Terada, Derrick [Terada.Derrick@epa.gov]; Thilsted, Eugene [Thilsted.Eugene@epa.gov]; Thomas, Derval [Thomas.Derval@epa.gov]; Thomas, Paul [thomas.paul@epa.gov]; Urban, Trevor [Urban.Trevor@epa.gov]; Utting, George [Utting.George@epa.gov]; VanTil, Barbara [vantil.barbara@epa.gov]; Weiler, Gregory [weiler.gregory@epa.gov]; Weinberg, Anne [Weinberg.Anne@epa.gov]; Werntz, James [Werntz.James@epa.gov]; Wilkinson, Bruce [wilkinson.bruce@epa.gov]; Winiecki, Eric

[Winiecki.Eric@epa.gov]; Winn, G. Dean [winn.gerald@epa.gov]; Winnett, Steven [winnett.steven@epa.gov]; Yaras, Michelle [Yaras.Michelle@epa.gov]; Young, Carl [young.carl@epa.gov]; Ziegler, Sam [Ziegler.Sam@epa.gov]; Zimmer, Andrea [Zimmer.Andrea@epa.gov]; Zimmerman, Dea [Zimmerman.Dea@epa.gov]; Bonnelycke, Nina [Bonnelycke.Nina@epa.gov]; Whitehurst, Shanika [whitehurst.shanika@epa.gov]; Subramanian, Hema [Subramanian.Hema@epa.gov]; Arling, Michelle [Arling.Michelle@epa.gov]; Green, Holly [Green.Holly@epa.gov]; Edmondson, Lucy [Edmondson.Lucy@epa.gov]; Robertson, Duane [Robertson.Duane@epa.gov]; Carlson, Christopher -FS [ccarlson@fs.fed.us]; Woodward, Cheryl [Woodward.Cheryl@epa.gov]; Jones-Johnson, Shea [Jones-Johnson.Shea@epa.gov]; Palomares, Art [Palomares.Art@epa.gov]; Lynch, Katie [Lynch.Katie@epa.gov]; Greg Zwicke [greg.zwicke@ftc.usda.gov]; ted.strauss@ca.usda.gov; johnnie.siliznoff@ca.usda.gov; 'jwfrey@usgs.gov' [jwfrey@usgs.gov]; O'Donnell, Thomas K. [ODonnell.Thomas@epa.gov]; 'karma.anderson@por.usda.gov' [karma.anderson@por.usda.gov]; Gioffre, Patricia [Gioffre.Patricia@epa.gov]; Roberts, Connie [Roberts.Connie@epa.gov]; Aaron, Mark [aaron.mark@epa.gov]; McGown, Michael [McGown.Michael@epa.gov]; Anderson-Carnahan, Linda [Anderson-Carnahan.Linda@epa.gov]; Carlson, Rachel [Carlson.Rachel@epa.gov]; Comerford, Sherri [Comerford.Sherri@epa.gov]; Lawrence, Patty - NRCS, Washington, DC [Patty.Lawrence@wdc.usda.gov]; Freeman, Tamara [Freeman.Tamara@epa.gov]; Aspy, Dale [Aspy.Dale@epa.gov]; Bassett, Jay [Bassett.Jay@epa.gov]; Bingham, Kimberly [Bingham.Kimberly@epa.gov]; Cheeks, Thornell [Cheeks.Thornell@epa.gov]; Davis, Molly [Davis.Molly@epa.gov]; Davis, Scott [Davis.ScottR@epa.gov]; Fifadara, Dipesh [Fifadara.Dipesh@epa.gov]; Gillam, Rick [Gillam.Rick@epa.gov]; Huey, Joel [Huey.Joel@epa.gov]; Johnston, Jon [Johnston.Jon@epa.gov]; Laycock, Kelly [Laycock.Kelly@epa.gov]; Newbold, Amy [Newbold.Amy@epa.gov]; Powell, Alan [Powell.Alan@epa.gov]; Strange, Joel [Strange.Joel@epa.gov]; Thomas, Chris [Thomas.Chris@epa.gov]; Webster, James [Webster.James@epa.gov]; Wylie, Mike [Wylie.Mike@epa.gov]; Echeverria, Marietta [Echeverria.Marietta@epa.gov]; Goodis, Michael [Goodis.Michael@epa.gov]; Ziobro, Joseph [Ziobro.Joseph@epa.gov]; Carbone, Chad [Carbone.Chad@epa.gov]; Taylor, Timothy [Taylor.Timothy@epa.gov]; Summerlin, Joe [summerlin.joe@epa.gov]; Melnick, Rachel - NIFA [RMelnick@nifa.usda.gov]; Spence, Kelley [Spence.Kelley@epa.gov]; Helder, Dirk [Helder.Dirk@epa.gov]; Billups, Angie [Billups.Angie@epa.gov]; Melanson, Kate [Melanson.Kate@epa.gov]; Murphy, Jim [Murphy.Jim@epa.gov]; Perkins, Stephen [Perkins.Stephen@epa.gov]; Taylor, TeAndra [Taylor.TeAndra@epa.gov]; Quigley, Heather [Quigley.Heather@epa.gov]; Murdie, Ashley [murdie.ashley@epa.gov]; Park, Jennifer [park.jennifer@epa.gov]; Calvo, Estrella [calvo.estrella@epa.gov]; Rush, Randall [Rush.Randall@epa.gov]; Giddings, Daniel [giddings.daniel@epa.gov]; OBrien, Wendy [OBrien.Wendy@epa.gov]; Farris, Laura [Farris.Laura@epa.gov]; Ferris, Lena [Ferris.Lena@epa.gov]; Williams, Joe [Williams.Joe@epa.gov]; Flournoy, Karen [Flournoy.Karen@epa.gov]; LUEHE, DOUGLAS [luehe.douglas@epa.gov]; Holst, Linda [holst.linda@epa.gov]; Damico, Brian [Damico.Brian@epa.gov]; Sands, Jeffrey [sands.jeffrey@epa.gov]; Sanzone, Stephanie [Sanzone.Stephanie@epa.gov]

CC: Ellington, Natalie [Ellington.Natalie@epa.gov]; FertikEdgerton, Rachel [FertikEdgerton.Rachel@epa.gov]; Lane, Willie [Lane.Willie@epa.gov]; Honker, William [honker.william@epa.gov]; Lawrence, Rob [Lawrence.Rob@epa.gov]; Argyropoulos, Paul [Argyropoulos.Paul@epa.gov]; Molloy, Jennifer [molloy.jennifer@epa.gov]; Chu, Karen [Chu.Karen@epa.gov]; Wirth, Karen [Wirth.Karen@epa.gov]; Williams, Bo (James) [Williams.James@epa.gov]; Schaeffer, Blake [Schaeffer.Blake@epa.gov]; Greene, Rick [Greene.Rick@epa.gov]; Chan, Janice [Chan.Janice@epa.gov]; Morant, Mervalin - NIFA [MMorant@nifa.usda.gov]; Berg, ElizabethG [Berg.ElizabethG@epa.gov]; Culver, Edison [Culver.Edison@epa.gov]; Hubbard, Joseph [Hubbard.Joseph@epa.gov]; Watson, Jane [watson.jane@epa.gov]; Crocker, Philip [crocker.philip@epa.gov]; Dwyer, Stacey [Dwyer.Stacey@epa.gov]; Ruiz, Thomas [Ruiz.Thomas@epa.gov]; Garcia, David [Garcia.David@epa.gov]; Cooper, WilliamF [Cooper.WilliamF@epa.gov]; Kaspar, Paul [kaspar.paul@epa.gov]; Hamilton, Denise [hamilton.denise@epa.gov]; Abshire, Andrea [Abshire.Andrea@epa.gov]; Bailley, Treasure [bailley.treasure@epa.gov]; Basile, Alfred [Basile.Alfred@epa.gov]; Hutchinson, Marcella [Hutchinson.Marcella@epa.gov]; Ismert, Peter [Ismert.Peter@epa.gov]; Kleeman, Gary [Kleeman.Gary@epa.gov]; Monahan, Peter [Monahan.Peter@epa.gov]; Oberley, Gregory [Oberley.Gregory@epa.gov]; Pfeiffer, Tricia [Pfeiffer.Tricia@epa.gov]; Steinhaus, Eric [Steinhaus.Eric@epa.gov]; Truskowski, Brent [truskowski.brent@epa.gov]; Canino, Richard [Canino.Richard@epa.gov]; Delapuente, Alejandro [adelapue@nsf.gov]; Wooster, Richard [Wooster.Richard@epa.gov]; Eric Nystrom (nystrom.eric@epa.gov) [nystrom.eric@epa.gov]; Sidrah Khan (khan.sidrah@epa.gov) [khan.sidrah@epa.gov]; Jones, Kristin [jones.kristin@epa.gov]; Kensinger, Justin [kensinger.justin@epa.gov]; Ortiz, Eduardo [Ortiz.Eduardo@epa.gov]; Restivo, Angela [Restivo.Angela@epa.gov]; Reinhart, Jill - NRCS, Indianapolis, IN [jill.reinhart@in.usda.gov]; Wooster-Brown, Catherine [Wooster-Brown.Catherine@epa.gov]; Jones, Margaret [jones.margaret@epa.gov]; McDonald, Holly [mcdonald.holly@epa.gov]; Foreman, Katherine [Foreman.Katherine@epa.gov]; Rivera-Lupianez, Ana [Rivera-Lupianez.Ana@epa.gov]; Nitsch, Chad [Nitsch.Chad@epa.gov]; Drake, Kerry [Drake.Kerry@epa.gov]; TENBROOK, PATTI [tenbrook.patti@epa.gov]; Gill, Sonam [Gill.Sonam@epa.gov]; Rea, Anne [Rea.Anne@epa.gov]; Dominy, Randy [dominy.randy@epa.gov]; Hayes, Mark [hayes.mark@epa.gov]; Quinn, Wilonda

[quinn.wilonda@epa.gov]; Thompson, Craig [Thompson.Craig@epa.gov]; Cashdollar, Jennifer [Cashdollar.Jennifer@epa.gov]; Johnston, JohnM [Johnston.JohnM@epa.gov]; Muche, Muluken [muche.muluken@epa.gov]; Sharpe, Kristinn [Sharpe.Kristinn@epa.gov]; Corona, Elizabeth [Corona.Elizabeth@epa.gov]; Magnan, Eric [Magnan.Eric@epa.gov]; Yin, Christina [Yin.Christina@epa.gov]; Gillen, Cara [Gillen.Cara@epa.gov]; Louis, Gail [Louis.Gail@epa.gov]; Berry, Vern [Berry.Vern@epa.gov]; Rodriguez-Hunt, Magda [Rodriguez-Hunt.Magda@epa.gov]; Kilgo, James [kilgo.james@epa.gov]; Gesalman, Claire [Gesalman.Claire@epa.gov]; EPA Smart Sectors [sectors@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]; Miller, Amy [Miller.Amy@epa.gov]; Brennan, Ross [Brennan.Ross@epa.gov]

Subject: Monthly Ag Issues Forum Call - New Recurring Scheduler; Call-in number Ex. 6 Ex. 6
Attachments: Agenda Attached: Monthly Ag Issues Forum Call - Recurring Scheduler ; Agenda Attached: Monthly Ag Issues Forum Call - Recurring Scheduler; Call-in number Ex. 6 Ex. 6
Location: Call-in number Ex. 6 Ex. 6

Start: 2/26/2015 7:30:00 PM
End: 2/26/2015 9:00:00 PM
Show Time As: Tentative

Recurrence: Monthly
the fourth Thursday of every 1 month(s) from 1:30 PM to 3:00 PM

Hello Everyone,

This is a new recurring scheduler for the monthly Ag Issues Forum conference calls. Please accept this invitation in order to have these calls added to your calendar; you can then decline individual calls as necessary.

Call-in number Ex. 6 Ex. 6

Suggestions for agenda topics are always welcome!

Background about the Ag Issues Forum calls:
EPA's National Ag Center sponsors monthly calls focusing on ag issues the fourth Thursday of every month from 2:30 – 4pm ET. Participants in the calls include EPA HQ and Regional staff interested in ag issues and reps from USDA and USGS.

Thanks!

Ginah
913-551-5028

EPA's Ag Center
http://www.epa.gov/agriculture

Appointment

To: 'ccarlson@fs.fed.us' [ccarlson@fs.fed.us]; 'greg.zwicke@ftc.usda.gov' [greg.zwicke@ftc.usda.gov]; Mortensen, Ginah [mortensen.ginah@epa.gov]; Adkins, Tabatha [Adkins.Tabatha@epa.gov]; Ager, Sara [Ager.Sara@epa.gov]; Allnutt, David [Allnutt.David@epa.gov]; amend, carol [amend.carol@epa.gov]; Arvizu, Christy [Arvizu.Christy@epa.gov]; Back, Tracy [back.tracy@epa.gov]; Bartenfelder, David [Bartenfelder.David@epa.gov]; Baumgartner, Donald [baumgartner.donald@epa.gov]; Bishop, Debbie [Bishop.Debbie@epa.gov]; Bloom, Judy [Bloom.Judy@epa.gov]; Boos, Gerard [Boos.Gerard@epa.gov]; Bravo, Antonio [Bravo.Antonio@epa.gov]; Breedlove, Dan [Breedlove.Dan@epa.gov]; Brown, Dan [Brown.Dan@epa.gov]; Burchard, Robert [Burchard.Robert@epa.gov]; Burns, Ward [Burns.Ward@epa.gov]; Butler, John [Butler.JohnJ@epa.gov]; Cabrera-Stagno, Valentina [Cabrera-Stagno.Valentina@epa.gov]; Carter-Jenkins, Shakeba [Carter-Jenkins.Shakeba@epa.gov]; Coats, Andrea [Coats.Andrea@epa.gov]; Collins, Jerry [collins.jerry@epa.gov]; Costa, Allison [Costa.Allison@epa.gov]; Daniels, Jason [Daniels.Jason@epa.gov]; DeHaven, Leigh [DeHaven.Leigh@epa.gov]; Downing, Jane [Downing.Jane@epa.gov]; Drake, Wendy [drake.wendy@epa.gov]; Dunkins, Robin [Dunkins.Robin@epa.gov]; Dunlevy, Robert [Dunlevy.Robert@epa.gov]; Dygowski, Laurel [Dygowski.Laurel@epa.gov]; Fenton, Kathleen [Fenton.Kathleen@epa.gov]; Fergusson, Bruce [Fergusson.Bruce@epa.gov]; Figueroa, Zaida [Figueroa.Zaida@epa.gov]; Fisher, Jacqueline [Fisher.Jacqueline@epa.gov]; Fitz, Nancy [Fitz.Nancy@epa.gov]; Flahive, Katie [Flahive.Katie@epa.gov]; Frizzell, Damon [Frizzell.Damon@epa.gov]; Galloway, Carol [Galloway.Carol@epa.gov]; Gargas, Toni [Gargas.Toni@epa.gov]; Gilbert, Neal [Gilbert.Neal@epa.gov]; Gould, Stephen [Gould.Stephen@epa.gov]; Gratz, Jeff [Gratz.Jeff@epa.gov]; Greenwald, Kathryn [Greenwald.Kathryn@epa.gov]; greg.johnson@por.usda.gov; Grier, Gina [Grier.Gina@epa.gov]; Grisier, Mary [Grisier.Mary@epa.gov]; Gunter, Jason [gunter.jason@epa.gov]; Halstead, Amanda [halstead.amanda@epa.gov]; Hamera, Donald [Hamera.Don@epa.gov]; Hart, Debbi [Hart.Debbi@epa.gov]; Heinemann, Kristina [Heinemann.Kristina@epa.gov]; Horak, David [horak.david@epa.gov]; Horchem, Brad [horchem.brad@epa.gov]; Howard, MarkW [Howard.MarkW@epa.gov]; Howland, Sanda [Howland.Sanda@epa.gov]; Hubert, Gayle [Hubert.Gayle@epa.gov]; Hyde, Tinka [hyde.tinka@epa.gov]; Jackson, Robert W. [Jackson.Robertw@epa.gov]; Jacobs, Kira [Jacobs.Kira@epa.gov]; Johnson, James [Johnson.James@epa.gov]; Kasai, Jeanne [Kasai.Jeanne@epa.gov]; Schefski, Melissa [Schefski.Melissa@epa.gov]; Keaney, Kevin [Keaney.Kevin@epa.gov]; Koethe, Robert [Koethe.Robert@epa.gov]; Krudner, Maureen [Krudner.Maureen@epa.gov]; Kupchan, Simma [Kupchan.Simma@epa.gov]; Lamb, Brad [lamb.brad@epa.gov]; Lancaster, Kris [Lancaster.Kris@epa.gov]; Larsen, Erika [Larsen.Erika@epa.gov]; Lehman, Stuart [Lehman.Stuart@epa.gov]; Lemieux, Paul [Lemieux.Paul@epa.gov]; LEVIN, NANCY [Levin.Nancy@epa.gov]; Longo, Linda [Longo.Linda@epa.gov]; Lubbe, Wendy [Lubbe.Wendy@epa.gov]; MacIntyre, Mark [Macintyre.Mark@epa.gov]; Mahoney, Michele [Mahoney.Michele@epa.gov]; Matthews, Mark [Matthews.Mark@epa.gov]; McCullough, Hugh [McCullough.Hugh@epa.gov]; Mitschele, Becky [Mitschele.Becky@epa.gov]; Moore, Audrey [Moore.Audrey@epa.gov]; Moses, Althea [Moses.Althea@epa.gov]; Nuhfer, Mark [Nuhfer.Mark@epa.gov]; Olszyk, David [Olszyk.David@epa.gov]; Ostigaard, Crystal [Ostigaard.Crystal@epa.gov]; Peak, Nicholas [Peak.Nicholas@epa.gov]; Perreault, Peg [Perreault.Peg@epa.gov]; Perrin, Rebecca [Perrin.Rebecca@epa.gov]; Peterson, Samuel [Peterson.Samuel@epa.gov]; Phillips, Todd [Phillips.Todd@epa.gov]; Pierce, Troy [Pierce.Troy@epa.gov]; Pinkerton, Kate [Pinkerton.Kate@epa.gov]; Plymale, Chris [Plymale.Christopher@epa.gov]; Pollard, Stephen [Pollard.Stephen@epa.gov]; Pont, Richard [Pont.Richard@epa.gov]; Porter, Donna [Porter.Donna@epa.gov]; Rao, Kate [Rao.kate@epa.gov]; Ridley, Caroline [Ridley.Caroline@epa.gov]; Rise, David [rise.david@epa.gov]; Roberto, Joseph [Roberto.Joseph@epa.gov]; Roberts, Rickey [Roberts.Rickey@epa.gov]; Sampath, Sam [Sampath.Sam@epa.gov]; Sarokin, David [Sarokin.David@epa.gov]; Schademann, Randy [Schademann.Randy@epa.gov]; Schafer, Jeannette [schafer.jeannette@epa.gov]; Schrock, Bill [Schrock.Bill@epa.gov]; Shenk, Kelly [shenk.kelly@epa.gov]; Shields, Amy [Shields.Amy@epa.gov]; Socha, Julianne [socha.julianne@epa.gov]; Spaulding, William [spaulding.william@epa.gov]; Sperry, Clint [Sperry.Clint@epa.gov]; Stevenson, Michelle [Stevenson.Michelle@epa.gov]; Stevenson, Suzanne [Stevenson.Suzanne@epa.gov]; Stoy, Alyse [Stoy.Alyse@epa.gov]; Suffian, Fred [Suffian.Fred@epa.gov]; Sullivan, Tim [Sullivan.Tim@epa.gov]; Swackhammer, J-Troy [Swackhammer.J-Troy@epa.gov]; Szylvian, Andrea M. [Szylvian.Andrea@epa.gov]; Tankersley, Julie [Tankersley.Julie@epa.gov]; Terada, Derrick [Terada.Derrick@epa.gov]; Thilsted, Eugene [Thilsted.Eugene@epa.gov]; Thomas, Derval [Thomas.Derval@epa.gov]; Thomas, Paul [thomas.paul@epa.gov]; Urban, Trevor [Urban.Trevor@epa.gov]; Utting, George [Utting.George@epa.gov]; VanTil, Barbara [vantil.barbara@epa.gov]; Weiler, Gregory [weiler.gregory@epa.gov]; Weinberg, Anne [Weinberg.Anne@epa.gov]; Werntz, James [Werntz.James@epa.gov]; Wilkinson, Bruce [wilkinson.bruce@epa.gov]; Winiecki, Eric [Winiecki.Eric@epa.gov]; Winn, G. Dean [winn.gerald@epa.gov]; Winnett, Steven [winnett.steven@epa.gov]; Yaras, Michelle [Yaras.Michelle@epa.gov]; Young, Carl [young.carl@epa.gov]; Ziegler, Sam [Ziegler.Sam@epa.gov]; Zimmer, Andrea [Zimmer.Andrea@epa.gov]; Zimmerman, Dea [Zimmerman.Dea@epa.gov]; Bonnelycke, Nina

[Bonnelycke.Nina@epa.gov]; Whitehurst, Shanika [whitehurst.shanika@epa.gov]; Subramanian, Hema [Subramanian.Hema@epa.gov]; Arling, Michelle [Arling.Michelle@epa.gov]; Green, Holly [Green.Holly@epa.gov]; Edmondson, Lucy [Edmondson.Lucy@epa.gov]; Robertson, Duane [Robertson.Duane@epa.gov]; Woodward, Cheryl [Woodward.Cheryl@epa.gov]; Jones-Johnson, Shea [Jones-Johnson.Shea@epa.gov]; Palomares, Art [Palomares.Art@epa.gov]; Lynch, Katie [Lynch.Katie@epa.gov]; ted.strauss@ca.usda.gov; johnnie.siliznoff@ca.usda.gov; O'Donnell, Thomas K. [ODonnell.Thomas@epa.gov]; Gioffre, Patricia [Gioffre.Patricia@epa.gov]; Roberts, Connie [Roberts.Connie@epa.gov]; Aaron, Mark [aaron.mark@epa.gov]; McGown, Michael [McGown.Michael@epa.gov]; Comerford, Sherri [Comerford.Sherri@epa.gov]; Carbone, Chad [Carbone.Chad@epa.gov]; Taylor, Timothy [Taylor.Timothy@epa.gov]; Summerlin, Joe [summerlin.joe@epa.gov]; Spence, Kelley [Spence.Kelley@epa.gov]; Billups, Angie [Billups.Angie@epa.gov]; Melanson, Kate [Melanson.Kate@epa.gov]; Perkins, Stephen [Perkins.Stephen@epa.gov]; Taylor, TeAndra [Taylor.TeAndra@epa.gov]; Quigley, Heather [Quigley.Heather@epa.gov]; Murdie, Ashley [murdie.ashley@epa.gov]; Park, Jennifer [park.jennifer@epa.gov]; Calvo, Estrella [calvo.estrella@epa.gov]; Rush, Randall [Rush.Randall@epa.gov]; Giddings, Daniel [giddings.daniel@epa.gov]; OBrien, Wendy [OBrien.Wendy@epa.gov]; Farris, Laura [Farris.Laura@epa.gov]; Ferris, Lena [Ferris.Lena@epa.gov]; Williams, Joe [Williams.Joe@epa.gov]; Flournoy, Karen [Flournoy.Karen@epa.gov]; LUEHE, DOUGLAS [luehe.douglas@epa.gov]; Holst, Linda [holst.linda@epa.gov]; Damico, Brian [Damico.Brian@epa.gov]; gfritz@usgs.gov; 'jcoles@usgs.gov' [jcoles@usgs.gov]; 'mdraper@nifa.usda.gov' [mdraper@nifa.usda.gov]; 'sjkalkho@usgs.gov' [sjkalkho@usgs.gov]; Carlson, Christopher -FS [ccarlson@fs.fed.us]; Greg Zwicke [greg.zwicke@ftc.usda.gov]; 'jwfrey@usgs.gov' [jwfrey@usgs.gov]; 'karma.anderson@por.usda.gov' [karma.anderson@por.usda.gov]; Anderson-Carnahan, Linda [Anderson-Carnahan.Linda@epa.gov]; Carlson, Rachel [Carlson.Rachel@epa.gov]; Lawrence, Patty - NRCS, Washington, DC [Patty.Lawrence@wdc.usda.gov]; Freeman, Tamara [Freeman.Tamara@epa.gov]; Aspy, Dale [Aspy.Dale@epa.gov]; Bassett, Jay [Bassett.Jay@epa.gov]; Bingham, Kimberly [Bingham.Kimberly@epa.gov]; Cheeks, Thornell [Cheeks.Thornell@epa.gov]; Davis, Molly [Davis.Molly@epa.gov]; Davis, Scott [Davis.ScottR@epa.gov]; Fifadara, Dipesh [Fifadara.Dipesh@epa.gov]; Gillam, Rick [Gillam.Rick@epa.gov]; Huey, Joel [Huey.Joel@epa.gov]; Johnston, Jon [Johnston.Jon@epa.gov]; Laycock, Kelly [Laycock.Kelly@epa.gov]; Newbold, Amy [Newbold.Amy@epa.gov]; Powell, Alan [Powell.Alan@epa.gov]; Strange, Joel [Strange.Joel@epa.gov]; Thomas, Chris [Thomas.Chris@epa.gov]; Webster, James [Webster.James@epa.gov]; Wylie, Mike [Wylie.Mike@epa.gov]; Echeverria, Marietta [Echeverria.Marietta@epa.gov]; Goodis, Michael [Goodis.Michael@epa.gov]; Ziobro, Joseph [Ziobro.Joseph@epa.gov]; Melnick, Rachel - NIFA [RMelnick@nifa.usda.gov]; Helder, Dirk [Helder.Dirk@epa.gov]; Murphy, Jim [Murphy.Jim@epa.gov]; Sands, Jeffrey [sands.jeffrey@epa.gov]; Jennings, Kim [Jennings.Kim@epa.gov]; Jacob, Sicy [Jacob.Sicy@epa.gov]; Sanzone, Stephanie [Sanzone.Stephanie@epa.gov]

CC: Oberley, Gregory [Oberley.Gregory@epa.gov]; Margaret Jones [Jones.Margaret@epa.gov]; Sonam Gill [gill.sonam@epa.gov]; Ellington, Natalie [Ellington.Natalie@epa.gov]; Wirth, Karen [Wirth.Karen@epa.gov]; Watson, Jane [watson.jane@epa.gov]; Dwyer, Stacey [Dwyer.Stacey@epa.gov]; Ruiz, Thomas [Ruiz.Thomas@epa.gov]; Cooper, WilliamF [Cooper.WilliamF@epa.gov]; Kaspar, Paul [kaspar.paul@epa.gov]; Hamilton, Denise [hamilton.denise@epa.gov]; Eric Nystrom (nystrom.eric@epa.gov) [nystrom.eric@epa.gov]; Sidrah Khan (khan.sidrah@epa.gov) [khan.sidrah@epa.gov]; Jones, Kristin [jones.kristin@epa.gov]; Foreman, Katherine [Foreman.Katherine@epa.gov]; Nitsch, Chad [Nitsch.Chad@epa.gov]; Drake, Kerry [Drake.Kerry@epa.gov]; TENBROOK, PATTI [tenbrook.patti@epa.gov]; Dominy, Randy [dominy.randy@epa.gov]; FertikEdgerton, Rachel [FertikEdgerton.Rachel@epa.gov]; Lane, Willie [Lane.Willie@epa.gov]; Honker, William [honker.william@epa.gov]; Lawrence, Rob [Lawrence.Rob@epa.gov]; Argyropoulos, Paul [Argyropoulos.Paul@epa.gov]; Molloy, Jennifer [molloy.jennifer@epa.gov]; Chu, Karen [Chu.Karen@epa.gov]; Williams, Bo (James) [Williams.James@epa.gov]; Schaeffer, Blake [Schaeffer.Blake@epa.gov]; Greene, Rick [Greene.Rick@epa.gov]; Chan, Janice [Chan.Janice@epa.gov]; Morant, Mervalin - NIFA [MMorant@nifa.usda.gov]; Berg, ElizabethG [Berg.ElizabethG@epa.gov]; Culver, Edison [Culver.Edison@epa.gov]; Hubbard, Joseph [Hubbard.Joseph@epa.gov]; Crocker, Philip [crocker.philip@epa.gov]; Garcia, David [Garcia.David@epa.gov]; Abshire, Andrea [Abshire.Andrea@epa.gov]; Bailley, Treasure [bailley.treasure@epa.gov]; Basile, Alfred [Basile.Alfred@epa.gov]; Hutchinson, Marcella [Hutchinson.Marcella@epa.gov]; Ismert, Peter [Ismert.Peter@epa.gov]; Kleeman, Gary [Kleeman.Gary@epa.gov]; Monahan, Peter [Monahan.Peter@epa.gov]; Pfeiffer, Tricia [Pfeiffer.Tricia@epa.gov]; Steinhaus, Eric [Steinhaus.Eric@epa.gov]; Truskowski, Brent [truskowski.brent@epa.gov]; Canino, Richard [Canino.Richard@epa.gov]; Delapuente, Alejandro [adelapue@nsf.gov]; Wooster, Richard [Wooster.Richard@epa.gov]; Kensinger, Justin [kensinger.justin@epa.gov]; Ortiz, Eduardo [Ortiz.Eduardo@epa.gov]; Restivo, Angela [Restivo.Angela@epa.gov]; Reinhart, Jill - NRCS, Indianapolis, IN [jill.reinhart@in.usda.gov]; Wooster-Brown, Catherine [Wooster-Brown.Catherine@epa.gov]; Jones, Margaret [jones.margaret@epa.gov]; McDonald, Holly [mcdonald.holly@epa.gov]; Rivera-Lupianez, Ana [Rivera-Lupianez.Ana@epa.gov]; Gill, Sonam [Gill.Sonam@epa.gov]; Rea, Anne [Rea.Anne@epa.gov]; Hayes, Mark [hayes.mark@epa.gov]; Quinn, Wilonda [quinn.wilonda@epa.gov]; Thompson, Craig [Thompson.Craig@epa.gov]; Cashdollar, Jennifer

[Cashdollar.Jennifer@epa.gov]; Johnston, JohnM [Johnston.JohnM@epa.gov]; Muche, Muluken [muche.muluken@epa.gov]; Sharpe, Kristinn [Sharpe.Kristinn@epa.gov]; Corona, Elizabeth [Corona.Elizabeth@epa.gov]; Tapia, Cecilia [Tapia.Cecilia@epa.gov]; Cassel, Cynthia [Cassel.Cynthia@epa.gov]; DeLong, Tiffany [delong.tiffany@epa.gov]; Chandler, Joe [Joe.Chandler@fema.dhs.gov]; Tilley, Amber [Tilley.Amber@epa.gov]; Wolfe, Michelle [Michelle.Wolfe@fema.dhs.gov]; Tapp, Joshua [Tapp.Joshua@epa.gov]; Mehl, Hollis [Mehl.Hollis@epa.gov]; Blank, Valerie [Blank.Valerie@epa.gov]

Subject: Agenda Attached: Monthly Ag Issues Forum Call - Recurring Scheduler
Attachments: Ag Issues Forum Agenda - October-November 2017.docx
Location: Ex. 6 / Conference line: Ex. 6 ; code: Ex. 6

Start: 11/2/2017 6:30:00 PM
End: 11/2/2017 8:00:00 PM
Show Time As: Busy

Recurrence: (none)
the fourth Thursday of every 1 month(s) from 1:30 PM to 3:00 PM

Update 10/27/2017

Hello Everyone,

Attached is the agenda for the Thursday, November 2 call. There may be slides coming next week.

I am out of the office next week so Carol Galloway will be leading the call.

In addition to the ORD topic regarding recent and ongoing research on Kansas fishes -- They are looking for information from our group on any data that is available that might assist them in their research – agenda topics include:
-- An update from Jeff Sands, the new Advisor to the Administrator for Ag Policy
-- CERCLA and EPCRA reporting of air emissions from farms
-- new Air BMP document

If you have any questions, please contact Carol.

Thanks!
Ginah

Ag Issues Forum Agenda - Octobe...

Update

Hello Everyone,

There are conflicts with the October 26 call, so I am moving the call to Thursday, November 2, from 2:30 – 4pm ET.

For the November 2 call we will use an Adobe connect:
Adobe connect url (click on the conference link and enter with your First and Last name as a guest):
Ex. 6

Conference line: Ex. 6 , then enter the conference code: Ex. 6

Please Note: Audio from the conference line will be broadcast both by telephone and by computer via Adobe Connect. If you plan to participate by phone, please mute your computer speakers prior to the seminar to avoid feedback.

The agenda and some slides for a presentation by ORD will be sent as we get closer to the date for the call.

One of the topics for the call: ORD will discuss recent and ongoing research on Kansas fishes. They are looking for information from our group on any data that is available that might assist them in their research.
This research uses the Water Quality Portal (WQP) to access data. This data was collected by multiple agencies. USGS data comes from the NWIS database and EPA data comes from the STORET database. However, water quality, stream habitat, and fish community data are limited. Any water quality data including dissolved solids, conductivity, dissolved oxygen, and pesticide (atrazine,2,4-D, bifenthrin, etc.) and stream habitat (substrate type) information will improve the research extent and quality. Any stream water quality data will be appreciated.

Please forward this scheduler to others from your program who might be interested in this topic or have information on potential data sources.

Thanks!
Ginah

Hello Everyone,

This is a new recurring scheduler for the monthly Ag Issues Forum conference calls. Please accept this invitation in order to have these calls added to your calendar; you can then decline individual calls as necessary.

Call-in number Ex. 6 ; Ex. 6

Suggestions for agenda topics are always welcome!

Background about the Ag Issues Forum calls:
EPA's National Ag Center sponsors monthly calls focusing on ag issues the fourth Thursday of every month from 2:30 – 4pm ET. Participants in the calls include EPA HQ and Regional staff interested in ag issues and reps from USDA and USGS.

Thanks!

Ginah
913-551-5028

EPA's Ag Center
http://www.epa.gov/agriculture

Ag Issues Forum Call

Thursday, November 2, 2017
2:30-4:00 p.m. ET

FOR THIS CALL ONLY: Adobe connect url (click on the conference link and enter with your First and Last name as a guest): [HYPERLINK
Ex. 6
Conference line: Ex. 6 **then enter the conference code:** Ex. 6

Please Note: Audio from the conference line will be broadcast both by telephone and by computer via Adobe Connect. If you plan to participate by phone, please mute your computer speakers prior to the seminar to avoid feedback

I. Introduction/Roll Call: Carol Galloway (5 minutes)

II. Current Issues/Updates

A. Update from the Advisor to the Administrator on Ag Policy's Office – (10 mins) – Jeff Sands

Jeff was recently named the Advisor to the Administrator on Ag Policy and will provide an update on the activities of his office.

B. Recent and Ongoing Research on Kansas Fishes – Data Needed - (45 mins) - Karen Chu, Sustainable & Healthy Communities Research Program, Office of Research & Development, (202-578-5521); ORD (Sam Cohen) will run the adobe connect and open the conference lines.

ORD will provide slides closer to the meeting date, and people also will be able to download them via the adobe connect. An abstract of the project was attached to the meeting scheduler.

ORD will discuss the recent and ongoing research on Kanas fishes. They are looking for feedback from our group on any data that is available that might assist them in their research.
This research uses the Water Quality Portal (WQP) to access data. This data was collected by multiple agencies. USGS data comes from the NWIS database and EPA data comes from the STORET database. However, water quality, stream habitat, and fish community data are limited. Any water quality data including dissolved solids, conductivity, dissolved oxygen, and pesticide (atrazine,2,4-D, bifenthrin, etc.) and stream habitat (substrate type) information will improve the research extent and quality. Any stream water quality data will be appreciated.

Please invite anyone from your program who might be interested in this topic or have information on potential data sources.

C. CERCLA and EPCRA Reporting Requirements for Air Releases of Hazardous Substances from Animal Waste at Farms – (20 mins) – Kim Jennings, Division Director, (202-564- 7998); Patty Gioffre, Acting Deputy Division Director, (202-564-1972), and Sicy Jacob, Regulations Implementation Division, Office of Emergency Management, OLEM, (202-564-8019).

Note: in advance of the call, if you have questions you would like to have addressed during the call, please forward them to Sicy Jacob and cc Carol Galloway.

On December 18, 2008, EPA published a final rule that exempted farms from reporting air releases of hazardous substances from animal waste. This final rule applied to:

- Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); and

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- Section 304 of the Emergency Planning and Community Right-to-Know Act (EPCRA), if the farms stable or confine fewer than a certain numbers of animals.

On April 11, 2017, the DC Circuit Court vacated this final rule.

In response to a request from EPA, the DC Circuit Court extended the date by which farms must begin reporting these releases to November 15, 2017.

EPA recently released information to assist farmers in meeting CERCLA and EPCRA reporting requirements.

For more information: [HYPERLINK "https://www.epa.gov/epcra/cercla-and-epcra-reporting-requirements-air-releases-hazardous-substances-animal-waste-farms"]

D. Air BMPs - (20 mins) – Allison Costa (919-541-1322), EPA and Greg Zwicke (970-295-5621), USDA

The EPA's Office of Air Quality Planning and Standards (OAQPS) and the United States Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) recently released the "Agricultural Air Quality Conservation Measures: Reference Guide for Poultry and Livestock Production Systems." This EPA/NRCS collaboration provides a broad set of conservation practices for poultry and livestock operations that may address air resource concerns with a focus on NRCS conservation standards and other demonstrated practices.

As a follow-up to the 2012 guide, "Agricultural Air Quality Conservation Measures: Reference Guide for Cropping Systems and General Land Management," this new document proposes a variety of tools and measures for reducing emissions in the livestock and poultry industry. Developed as a technical resource, the guide describes different conservation measures that have been successfully demonstrated to reduce emissions of various air pollutants on farms. In addition, it offers general comments on the applicability of the measures to different types of farms and ranges of potential emission reductions.

To access the guide, please visit EPA's web site at [HYPERLINK "https://www.epa.gov/afos-air/agricultural-air-quality-conservation-measures-reference-guide-poultry-and-livestock"] or USDA's web site at [HYPERLINK "https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/air/quality/?cid=stelprdb1047144"].

III. Updates - (15 mins or as time allows):

- **USDA Update**
- **USGS Update**
- **Forest Service**
- **EPA Updates**
  - **Regions**
  - **HQ**

IV. Misc. Updates/Meetings - (5 mins.):

1) Reminder: The next Ag Issues Forum Conference call is scheduled for: **TBD**. In November and December the calls fall on or near the holidays, so we are looking at potential alternative dates. **Call-in number and access code:** Ex. 6 **access code** Ex. 6

2) Agenda topics: Please send suggestions for agenda topics to Ginah Mortensen: 913.551.5028 mortensen.ginah@epa.gov or Carol Galloway: 913.551.5092 galloway.carol@epa.gov

3) Others?

Message

From: Shane Kinne [skinne@mocorn.org]
Sent: 11/2/2017 4:17:44 PM
To: Sands, Jeffrey [sands.jeffrey@epa.gov]
CC: Samantha Davis [sdavis@mocorn.org]; Darrick Steen [dsteen@mocorn.org]
Subject: RE: Phone Call

Those folks are now copied. Can't even blame it on being a Monday.

Thanks, Jeff.

Shane

From: Shane Kinne
Sent: Thursday, November 2, 2017 9:56 AM
To: 'sands.jeffrey@epa.gov' <sands.jeffrey@epa.gov>
Subject: Phone Call

Hi Jeff,

I hope all is well. How about those Dawgs? Definitely a better year to be a Georgia fan than Mizzou.

Copied on this email is Samantha Davis and Darrick Steen. Samantha works with me on policy issues and Darrick is our lead on all things environmental. He works with us and Missouri Soybean. Would you have anytime next week to jump on the phone with the three of us?

Thanks in advance!

Shane Kinne
Director of Public Policy
Missouri Corn Growers Association

Message

From: Grantham, Nancy [Grantham.Nancy@epa.gov]
Sent: 1/22/2018 6:05:16 PM
To: D'Andrea, Michael [DANDREA.MICHAEL@EPA.GOV]; White, Terri-A [White.Terri-A@epa.gov]; schafer, joan [schafer.joan@epa.gov]
CC: Thomas, Latosha [Thomas.Latosha@epa.gov]; Lowery, Brigid [Lowery.Brigid@epa.gov]; Benjamin, Kent [Benjamin.Kent@epa.gov]; Colip, Matthew [colip.matthew@epa.gov]; Grantham, Nancy [Grantham.Nancy@epa.gov]; Bennett, Tate [Bennett.Tate@epa.gov]; Sands, Jeffrey [sands.jeffrey@epa.gov]; Subramanian, Hema [Subramanian.Hema@epa.gov]
Subject: FW: Request for comment on new study which finds 2X estimated poultry industry ammonia pollution in Chesapeake Bay region.
Attachments: Ammonia Report.pdf

Hi Region 3 –

Press secretaries here are wondering if region 3 can work with olem on responding to this .. Since it is embargoed until 3 p.m. – whatever statement you come up with .. we can then use for inquiries going forward.

Nancy Grantham
Office of Public Affairs
US Environmental Protection Agency
202-564-6879 (desk)
Ex. 6 (mobile)

From: Sean Reilly [mailto:sreilly@eenews.net]
Sent: Monday, January 22, 2018 11:26 AM
To: Press <Press@epa.gov>
Subject: Request for comment on new study which finds 2X estimated poultry industry ammonia pollution in Chesapeake Bay region.

Hi folks:

Let me know if you have any on-the-record response to the report's conclusion (summary highlighted in red) that ammonia emissions from the poultry industry in the Chesapeake Bay area are approximately twice what EPA has previously assumed. My deadline is 3:00 this afternoon.

Regards,
Sean

Sean Reilly
Reporter
E&E News
202-446-0433 (Desk)
Ex. 6 (Cell)
sreilly@eenews.net
Twitter: @SeanatGreenwire

E&E NEWS
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www.eenews.net • www.eenews.tv
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Ammonia Emissions from Poultry Industry More Harmful to Chesapeake Bay than Previously Thought

New Report Concludes that Air Pollution from Concentrated Animal Feeding Operations (CAFOs) is Twice as High as Estimated by EPA

FOR IMMEDIATE RELEASE: Monday, January 22, 2018

Media contact: Tom Pelton, Environmental Integrity Project, tpelton@environmentalintegrity.org or (202) 888-2703

Washington, D.C. – A new report from the Environmental Integrity Project concludes that ammonia emissions from the production of broiler chickens are likely twice as high as previously assumed by the Environmental Protection Agency.

EPA numbers suggest that a typical poultry operation – with an average inventory of 110,000 broilers – emits 12 tons of ammonia per year, based on outdated data from the 1990s. In fact, more recent monitoring in the United States shows that emissions would be as high as 24 tons per year.

The result is that annual emissions of ammonia air pollution in the Chesapeake Bay states are roughly 40,000 tons a year, not the 20,000 tons that EPA assumed when designing the Bay cleanup effort, according to the Environmental Integrity Project's new report, "Ammonia Emissions from Broiler Operations Higher than Previously Thought."

EPA's 2010 "pollution diet" for the Chesapeake Bay (the Total Maximum Daily Load, or Bay TMDL) estimates that ammonia air pollution is responsible for roughly 17 percent of the nitrogen feeding algae blooms and low-oxygen "dead zones" in the Bay. If EPA has been underestimating ammonia emissions from the chicken industry – as EIP's report concludes – then this contribution is even higher.

A bill introduced by Senator Richard S. Madaleno Jr. in the Maryland Senate – which is scheduled for a hearing at 1 pm on Wednesday before the Education, Health, and Environmental Affairs committee – is a good first step toward tackling the problem, said Abel Russ, attorney for the Environmental Integrity Project and author of the new report.

"The proposed Community Healthy Air Act would require the Maryland Department of the Environment to conduct air monitoring near poultry houses to obtain better data on ammonia air pollution," said Russ. "With better information we can find effective ways to control this pollution and clean up the Bay."

Chickens raised in industrial-scale Concentrated Animal Feeding Operations, or CAFOs, are a major part of the Chesapeake Bay watershed's farm economy. In 2016, poultry operations in the Bay states raised over one billion broilers (chickens raised for meat, not egg production). Over time, the industry has been producing larger and larger birds. Since 2002, the total weight of broilers produced in the watershed has increased by 25 percent, to 6.6 billion pounds in 2016, according to U.S. Department of Agriculture figures.

The manure inside chicken houses emits large quantities of ammonia and other pollutants. For many years, EPA has been estimating ammonia emissions using data from European broiler operations. In 2005, EPA initiated a study of air pollution from U.S. factory farm operations, and was supposed to finish that research by 2009. The agency has still not completed the work, but multiple studies have confirmed that U.S. broiler operations emit much more ammonia than European operations. This is because the American poultry industry produces larger birds, cleans out barns less often, and raises birds in a warmer climate.

The EIP report examined ammonia monitoring data from U.S. broiler operations conducted by academic researchers and government scientists and found that the average emissions per bird were roughly twice as high as the amount EPA has historically assumed.

EPA has long assumed that broilers emit 0.27 grams of ammonia per bird per day, which would multiply out to about 20,000 tons of ammonia per year from all of the broiler operations in the Chesapeake Bay region. EIP's analysis – using the more up-to-date U.S. numbers – concludes that emissions are more like 0.54 grams of ammonia per bird per day, totaling over 40,000 tons per year in the Bay region. (This analysis does not include turkey or egg production facilities.)

A typical broiler operation on the Delmarva Peninsula will have an average inventory of 110,000 chickens at any one time and produce over 500,000 chickens each year. Using the U.S. monitoring data, EIP estimates that this facility would emit between 19 and 24 tons of ammonia each year – twice the approximately 12 tons that EPA would estimate using the European numbers.

Once ammonia is emitted into the air, much of it quickly settles onto the land or water nearby. "This is a big problem that does not always get the attention it deserves," said EIP's Abel Russ. "We're making progress on many sources of nitrogen in the Bay, but ammonia emissions are probably increasing in lockstep with broiler production. This means that the amount of nitrogen air pollution escaping from poultry houses could really be the difference between a restored Chesapeake Bay and waters that continue to be impaired."

On Wednesday, the Maryland Senate is scheduled to hold a hearing on Senate Bill 133, the "Community Healthy Air Act." This bill would, among other things, require the Maryland Department of the Environment to measure and quantify ammonia emissions from large animal feeding operations.

A companion house bill is HB0026, sponsored by Delegates Robbyn Lewis and Shane Robinson. A hearing on this legislation is scheduled for 1 pm on January 31 before the House Environment and Transportation committee.

Air monitoring data generated pursuant to the law would be a critical element in achieving Bay cleanup targets because they would help show how much of the Eastern Shore's nitrogen pollution can be attributed to ammonia escaping from poultry operations. If chicken houses represent a major source of nitrogen, as the EIP report suggests, then meeting the goals of the Bay TMDL will require improved strategies or pollution control technologies to reduce these ammonia emissions.

The report, "Ammonia Emissions from Broiler Operations Higher than Previously Thought," can be found on the EIP website: http://www.environmentalintegrity.org/reports/ammonia-emissions/

The Environmental Integrity Project is a 15-year-old nonprofit, nonpartisan organization, based in Washington D.C., dedicated to enforcing environmental laws and holding polluters and governments accountable to protect public health.

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Ammonia Emissions from Broiler Operations Higher than Previously Thought

ENVIRONMENTAL INTEGRITY PROJECT

JANUARY 2018

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THE ENVIRONMENTAL INTEGRITY PROJECT

The Environmental Integrity Project (http://www.environmentalintegrity.org) is a nonpartisan, nonprofit organization established in March of 2002 by former EPA enforcement attorneys to advocate for effective enforcement of environmental laws. EIP has three goals: 1) to provide objective analyses of how the failure to enforce or implement environmental laws increases pollution and affects public health; 2) to hold federal and state agencies, as well as individual corporations, accountable for failing to enforce or comply with environmental laws; and 3) to help local communities obtain the protection of environmental laws.

For questions about this report, please contact EIP Director of Communications
Tom Pelton at (202) 888-2703 or
tpelton@environmentalintegrity.org.

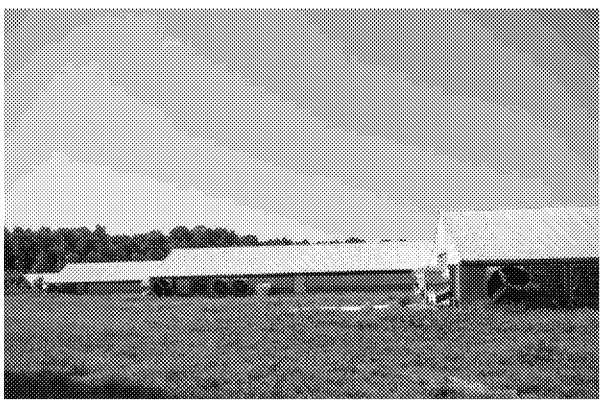
Ammonia Emissions from Broiler Operations Higher than Previously Thought

Executive Summary

The Chesapeake Bay has long suffered from algae blooms, dead zones, and other effects on aquatic life that are caused by excess nitrogen and phosphorus pollution. The Total Maximum Daily Load (TMDL), often described as a "pollution diet" for the Bay, has resulted in significant pollution reductions, but further reductions will be necessary to restore the health of the Bay.

Ammonia, the pungent gas released from animal waste, is responsible for a significant fraction of the nitrogen load to the Chesapeake Bay each year. Airborne nitrogen is responsible for roughly one third of the nitrogen load. Historically, most of that nitrogen has been in the form of nitrogen oxides (NOx) from fossil fuel combustion and other sources. Clean Air Act regulations have produced steady declines in NOx, but ammonia has been increasing, and ammonia will soon be the dominant form of atmospheric nitrogen loads.

The largest source of ammonia emissions is livestock waste, and a large component of that source category comes from the factory farms that produce broiler chickens. Since ammonia from broilers is a significant pollution problem, we attempted to determine whether the Environmental Protection Agency was accurately estimating these emissions in its TMDL model. This report reaches the following conclusions:



A broiler chicken operation located on Maryland's Eastern Shore.

1. Broiler barns emit much more ammonia than EPA has traditionally assumed. The Chesapeake Bay model assumes that local broiler confinements emit the same amount of ammonia, per broiler, as similar facilities in Europe. Yet we know that American broiler emissions are much higher than European broiler emissions. This is due to a number of factors: We raise larger birds, and larger birds emit more

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ammonia; we re-use the bedding (litter) in broiler confinements much more than European operations; and we raise our broilers in a warmer climate.

2. EPA has traditionally assumed that broilers emit 0.27 grams of ammonia per bird, per day. Based on our survey of the literature on American broiler operations, we believe that a more realistic estimate is 0.54 grams of ammonia per bird, per day.

3. Using alternative emissions factors, ammonia emissions are equal to 34.3 grams of ammonia per broiler sold, or 14.2 grams of ammonia for every kilogram of broiler sold.

4. Applying these factors to broiler statistics for the Bay states, we determined that actual ammonia emissions are roughly twice as high as what EPA assumes: EPA's emissions factor predicts emissions of roughly 20,000 tons per year, while our factors predict emissions of roughly 40,000 tons per year.

5. A typical broiler CAFO on the Delmarva Peninsula – producing 500,000 broilers each year at an average weight of six pounds – is likely emitting between 19 and 24 tons of ammonia each year. Yet EPA's emissions factor would only predict 12 tons.

In order to ensure that the EPA is accurately accounting for this important source of pollution, we urge EPA to clarify its assumptions about broiler confinement emissions, and if necessary adjust its assumptions to reflect the current state of the science with regard to American broiler operations.

Introduction

Ammonia emissions from factory farms present a clear threat to environmental quality. The prime example of this threat may be the Chesapeake Bay, where ammonia is a major contributor to persistent algae blooms and dead zones. According the U.S. EPA's Total Maximum Daily Load (TMDL) for the Chesapeake Bay, "[a]ir sources contribute about a third of the total nitrogen loads delivered to the [] Bay."[1] Specifically, using the models they had at the time, EPA estimated that atmospheric deposition was responsible for 31-36% of the total nitrogen load. Of that, the majority (78-81%) was deposited on land or non-tidal waterways and then transported to the Bay.[2]

Nitrogen deposits in various forms, mainly nitrogen oxides (NOx) and ammonia. Table 1 shows TMDL estimates of nitrogen deposition over time. Two things stand out. First, while NOx has historically been the dominant source of nitrogen deposition, ammonia is expected to be the dominant source now or in the near future. Second, while NOx deposition is falling over time, and wet ammonia deposition (ammonia that falls with precipitation) is

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roughly constant, dry ammonia deposition (ammonia that deposits in gaseous form) is increasing.

Table 1. Atmospheric deposition loads of nitrogen (millions of pounds as N) to the Chesapeake Bay watershed. Adapted from TMDL Table L-3.[3]

Year	Dry NOx	Wet NOx	Dry ammonia	Wet ammonia	Total N	Ammonia/total
1985	293	154	66	79	592	24%
2002	208	102	66	76	452	31%
2010	135	67	85	73	360	44%
2020	97	50	98	76	321	54%

The TMDL estimates in Table 1 suggest that ammonia deposition is currently responsible for roughly half of the atmospheric contribution, or roughly 17%, of the total nitrogen loads to the Bay.[4]

Why are ammonia emissions and deposition increasing?

Ammonia deposition is increasing for two reasons. First, changes in atmospheric chemistry, including a decline in atmospheric NOx concentrations, increase the likelihood that ambient ammonia will deposit in gaseous form. Second, ammonia emissions are increasing, due mainly to an increase in animal production and a parallel increase in manure production.[5]

Ammonia is a highly reactive gas that tends to form fine particles by combing with NOx and other gases in the air.[6] As NOx emissions fall, less ammonia is "captured" in fine particle formation. This is significant because gaseous ammonia has a short residence time in the atmosphere and deposits close to the source of emissions, while fine particles stay aloft for much longer and can travel far from the source.[7] The steep decline in NOx levels is a major victory for public health, helping to reduce smog and acid rain as well as the deadly fine particles linked to heart disease and premature death. NOx is also contributing less to nitrogen loadings in the Bay as emissions decline. But those water quality benefits will be largely offset by increases in the local deposition of ammonia no longer reacting with NOx to make fine particles.

The other factor causing an increase in ammonia deposition is the increase in ammonia emissions. Most of the ammonia in the air comes from agriculture. According to the most recent National Emissions Inventory, out of a national total of 3.9 million tons of ammonia that are emitted each year, 1 million tons come from synthetic fertilizer and 2.2 million tons come from livestock waste.[8] When animal production increases, ammonia emissions also

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increase. The Bay TMDL doesn't include any limits on ammonia emissions from agriculture, although EPA estimated emissions could be cut about 30% at fairly low cost.[9] Instead, EPA is counting on the NOx reductions driven by Clean Air Act rules to keep the airborne nitrogen load low enough to meet cleanup goals by 2025. That scenario will be undermined if ammonia emissions prove to be higher than EPA expects.

Within the livestock sector, one of the largest sources of ammonia is the production of chickens for meat ("broilers"). On a per-weight basis, broilers excrete more nitrogen than any other major animal production group – more than twice as much as pigs, and more than three times as much as most cows.[10]

Since 2002, broiler production in the Chesapeake Bay watershed (in pounds) has increased by 25%, driven in part by a 17% increase in the average size of the broilers being sold (see Appendix A). As we show in more detail below, this has led to a large increase in ammonia emissions over the same time period.

Estimating Ammonia Emissions from Broiler Operations

Background

The amount of ammonia released from broiler confinements can be estimated in different ways. The most direct way is to simply measure the ammonia. This has been done in several studies, described below. For most broiler production facilities, however, routine monitoring is too expensive and technically challenging. It is therefore necessary to derive more generic emissions estimating methods that can be applied to facilities without monitors.

Methods for estimating emissions come with important trade-offs. The most accurate methods are complicated and data-intensive. Other methods are easier to use, but may be less accurate. The more complicated methods have to account for the long list of variables influencing emissions. To begin with, ammonia emissions from broiler CAFOs change over time. A typical broiler operation will raise multiple flocks of broilers each year. Older, heavier birds emit more ammonia than younger, smaller birds. This means that the emissions from a broiler house will increase as a flock of birds inside the house ages. After a flock is sold, the broiler house is cleaned out, either superficially ("decaking") or with a full removal of built-up manure and bedding. The cleanouts produce pulses of ammonia emissions that depend on, among other things, the number of flocks since the last full cleanout. Other factors affecting ammonia emissions include temperature and humidity.

These variables can be accounted for in emissions models, which can be either process-based or statistical. Process-based models attempt to estimate ammonia emissions using

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basic physical and chemical principles and the input data described above. For example, researchers at Carnegie Mellon University have developed a model that predicts emissions based on the density of livestock in a barn, the nitrogen content of the waste, and ambient temperature.[11] Statistical models start with emissions monitoring data and attempt to predict emissions on the basis of a similar list of factors. The EPA draft Emissions Estimating Methodology (EEM) for broilers is an example of a set of statistical models.[12] In the draft EEM, EPA presented three models of increasing complexity that used between 11 and 31 regression coefficients, including average bird mass, confinement clean-out history, temperature, and humidity.[13] Whether process-based or statistical, emissions models can only be used when all of the input variables can be quantified. This is often not possible. For example, we may want to estimate how much ammonia a planned, but not yet built, broiler CAFO will emit. We will know some things, like the number of chickens that the barns can hold, but we would only be guessing about variables like pounds of broilers produced each year, the schedule of barn cleanouts, and weather. Or we may be interested in aggregate emissions for a large, diverse area like the Chesapeake Bay watershed. Given the data and computational limitations at that scale, a complex emissions model may be too difficult to implement.

The simplest way to estimate emissions is to use an "emissions factor." Emissions factors are basic coefficients, expressed (for broilers) as some variation on 'pounds of ammonia per chicken.' Emissions factors can be derived from monitoring data or models, but in either case they are meant to approximate an average facility. Emissions factors are less precise than detailed models, but on the other hand they are easier to use, and they can produce reasonably accurate emissions totals, particularly for large areas like states or the Bay watershed.

In the case of broiler confinements, emissions factors might have one of three denominators:

- **Inventory:** The EPA has traditionally used an inventory-based emissions factor, described in more detail below, in the form of kilograms of ammonia per broiler per year, or kilograms of ammonia per broiler per month, with broiler "inventory" being the average population of broilers in a confinement, or the capacity of broiler barns at a confinement. At the county or state level, inventory statistics can be found in the USDA Census of Agriculture, which is compiled every five years.[14]

- **Production (Sales):** It may be preferable to estimate emissions based on production rather than inventory. There can be several cycles or flocks of broiler production over the course of a year. For example, in 2012, Maryland had an average statewide broiler inventory of 64.2 million broilers, but it produced (sold) 304.7 million birds (Appendix A), suggesting that there were, on average, about five flocks of broilers at each confinement. In order to account for differences in the number of flocks per

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year – differences that are not apparent in basic inventory statistics – ammonia emissions can be approximated as "pounds of ammonia per broiler sold."[15]

- **Production (Weight):** Not all broilers are the same weight when they are sold. For example, the average broiler in Delaware weighs almost twice as much as the average broiler in West Virginia (see Appendix A). And we know that larger broilers excrete more ammonia. So a third emissions factor would be expressed as "pounds of ammonia per pound of broiler sold" over the course of a year.

In the discussion that follows we attempt to derive all three types of emissions factor from available monitoring studies.

EPA Emission Factors

The EPA has historically used an inventory-based emissions factor. Athough the Agency has chosen to express the factor in different ways, the factor itself was constant from as early as 2004 through at least 2011.

In 2004, EPA published a draft report documenting the technical basis for its National Emissions Inventory (NEI). At that time, EPA expressed the ammonia emissions factor for broiler confinements as 0.22 pounds of ammonia per broiler per year (0.22 lb NH_3/head/yr).[16] It is important to note that this emissions factor was derived entirely from European studies.[17] American and European agricultural practices (and meteorological conditions) are quite different. European broiler operations tend to replace the litter after each flock, while American broiler operation reuse litter for up to a year.[18] European operations generally grow lighter birds.[19] Temperatures in Europe are cooler.[20] All of these factors cause American broiler emission rates to be significantly greater than European emission rates. Wheeler et al. (2006) presented seven American estimates alongside seven European estimates.[21] The mean ammonia emissions rate from the American studies was 0.64 pounds per broiler per year, three times higher than the mean from the European studies (0.21 pounds per broiler per year).[22]

In the documentation for the 2011 NEI, EPA stated that it was using Carnegie Mellon's emissions model, but it listed a single emissions factor for broiler confinements.[23] The new emissions factor – 8.32E-03 kg NH_3/bird-month – is, after converting kilograms to pounds and months to years, equal to the old emissions factor. In the documentation for the 2014 NEI, EPA claims to have changed the way it uses the Carnegie Mellon model to estimate poultry emissions, but there is no evidence that the emissions factor for broiler confinements has changed.[24]

For purposes of EPA's Chesapeake Bay model, the Agency is using the 2011 NEI for at least part of its simulations,[25] and maybe for all of its simulations.[26] In short, it appears that

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EPA continues to assume that broiler confinements emit 0.22 pounds of ammonia per broiler per year, an assumption based on outdated European data. As discussed in detail below, that assumption is probably far too low.

Monitored emissions from broiler houses: Total emissions

Ammonia emissions from broiler houses have been measured many times, in different locations (inside and outside the United States) and using different methods. We reviewed studies from within the United States in order to evaluate whether the current EPA emissions factor is still valid, and in order to approximate a more reasonable emissions factor. As a preliminary matter, it is important to note that some studies attempted to capture the full cycle of a broiler confinement, including the cleanout period that can cause a pulse in ammonia emissions, while other studies only looked at emissions while there were broilers in a barn. This section only looks at the studies that monitored the total emissions over full cycles, including the periods between flocks. The following section discusses studies that only looked at the grow-out period.

NATIONAL AIR EMISSIONS MONITORING STUDY (NAEMS)

Between 2007 and 2009, researchers working with the EPA monitored the emissions of ammonia and other pollutants from four broiler houses, two in California and two in Kentucky.[27] Ammonia emissions were calculated by subtracting ambient air concentrations from exhaust air concentrations. In 2012, EPA released a draft Emissions-Estimating Methodology (EEM) for broilers.[28] In that 2012 document, EPA provided the following simple summary statistics that include all periods (growout, decaking, and full cleanout):

Table 2: Summary ammonia data for NAEMS broiler studies.[29]

	Average house inventory	Average daily emissions (lb/d-house)	Grams per day per bird
California barn 1	21,000	22.49	0.49
California barn 2	21,000	19.82	0.43
Kentucky barn 1	23,000	26.76	0.53
Kentucky barn 2	24,500	27.29	0.50

It is also possible to represent NAEMS emissions as a function of broiler production statistics. The Kentucky study derived a sales-based emissions factor of 35.4 grams of ammonia per bird marketed,[30] and a weight-based factor of 12.5 grams of ammonia per kilogram of broiler.[31] The study of California barns did not provide comparable estimates, but the California study did provide daily data on bird counts and bird weight, from which

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we can estimate production statistics. Appendix B provides an example of the data, and explains how we derived emissions factors from the data. Based on the raw data, it appears that production-based emissions factors for the California study would be 29 grams of ammonia per bird marketed, and 11 grams of ammonia per kilogram of broiler.

MOORE ET AL. (2011)

Moore et al. monitored four broiler barns in Arkansas in 2005 and 2006, over five flock cycles, including the periods between flocks.[32] The authors present a production-based emissions estimate of 37.5 grams of ammonia per bird,[33] and they also provide average bird weight (2.582 kg), from which a weight-based estimate can be derived (14.5 grams of ammonia per kg of broiler). In order to translate these values into an inventory-based estimate, we had to make two calculations. First, since inventory generally refers to the number of birds placed in a barn, rather than the number that survive to be sold, and the broiler in this study had a mortality rate of roughly 4 percent, we had convert 37.5 grams of ammonia per bird *sold* to 35.9 grams of ammonia per bird *placed*. Second, we had to determine how many days of emissions each bird was responsible for, including both the grow-out and the between-flock periods. The authors provide start dates for each of the five flocks in their study, from which we were able to calculate the lengths of the first four flock cycles (from one start date to the next).[34] The average flock cycle was 70.5 days. An inventory-based emissions factor would therefore be roughly 35.9 grams per bird divided by 70.5 days, or 0.51 grams of ammonia per bird per day.

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Table 3: Summary of monitoring data and emissions factors for the full broiler cycle, including both grow-out and between-flock periods

Source	Location	No. of barns	Average age of flock (days)	Average flock size (per barn)	Average market weight (kg)	g NH3/bird-day	g NH3/bird sold	g NH3/kg market weight
EPA (2012)	CA	2	47.0[35]	21,000[36]	2.65[37]	0.46[38]	29.0[39]	11.0[40]
EPA (2012)	KY	2	51.5[41]	25,100[42]	2.76[43]	0.52[44]	35.4[45]	12.5[46]
Moore et al. (2011)	AR	4	50.4[47]	26,300[48]	2.58[49]	0.51[50]	37.5[51]	14.5[52]

Monitored Emissions from Broiler Houses: Grow-Out Period Only

Several studies have measured ammonia emissions during the grow-out period only (i.e., not during the between-flock barn cleanouts). Lacey et al. (2003) measured ammonia emissions from four broiler houses in Texas in 2000, and derived an emissions factor of 31 grams of ammonia per bird.[53] Siefert et al. have published two studies on the Delmarva peninsula with quite different results. The first study, published in 2004, derived an emissions factor of 38 grams of ammonia per bird, while the second study, published in 2008, derived an emissions factor of just 5 grams of ammonia per bird. The authors attribute the difference in part to the fact that the newer study took place at a tunnel-ventilated broiler barn, while the earlier study took place at a side-wall ventilated house.[54] Yet all of the studies in Table 4, below, with the exception of the 2004 Siefert et al. study, were conducted at tunnel-ventilated houses, and all show much higher emissions rates. The 2008 Siefert and Scudlark study appears to be an outlier for some other reason, which may include errors in the analysis. Wheeler et al. (2006),[55] in a study funded by the U.S. Department of Agriculture, measured ammonia emissions from twelve barns in Pennsylvania and Kentucky in 2002 and 2003. The authors only assessed emissions during the grow-out period, but found a relatively wide range of daily emissions rates, from 0.47 to 0.98 grams of ammonia per bird per day. Miles et al. (2014) measured ammonia emissions from a single barn in Mississippi in 2007 over the course of five flocks.[56]

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Table 4: Summary of monitoring data and emissions factors for only the grow-out period

Source	Location	No. of barns	Average age of flock (days)	Average flock size (per barn)	Average weight (kg)	g NH3/ bird-day	g NH3/ bird sold	g NH3/kg market weight
Lacey et al. 2003[57]	TX	4	49	27,500	2.4	0.63[58]	31.0	12.9[59]
Siefert et al. 2004[60]	MD	1	42	11,155	*not available*	0.90[61]	37.8[62]	*not available*
Wheeler et al. 2006[63]	PA	4	42	32,600	2.2	0.56[64]	23.5[65]	10.7[66]
Wheeler et al. 2006[67]	KY	4	56	22,500	2.9	0.87[68]	49.5[69]	16.8[70]
Siefert and Scudlark 2008[71]	Delmarva Peninsula	1	42	18,600	*not available*	0.12[72]	5.2[73]	*not available*
Miles et al. 2014[74]	MS	1	43	27,860	2.27	0.54	23.5	10.4[75]

The studies that monitored total, full-cycle emissions (Table 3) also segregated emissions between the grow-out and between-flock periods, which allows us to derive scaling factors between grow-out emissions and total emissions. For production-based emissions factors, the scaling factor will be a multiplier that increases the emissions factor, because each broiler is responsible for between-flock emissions that are always additive to grow-out emissions. For an inventory-based emissions factor, the scaling factor could theoretically result in an increase or a decrease in the amount of ammonia emitted per bird per day. Although peak emissions during the clean-out or decaking of a barn will often be higher than peak emissions during the grow-out period, the average daily emission rate over the entire between-flock period may be lower than the average daily emission rate during the grow-out period. Tables 5 and 6 compare grow-out and total emissions from studies with available data. These tables show that total emissions are roughly 21% higher than emissions from the grow-out period only, and that the total daily emissions rate over the entire flock cycle is roughly 7% lower than the daily emissions rate during the grow-out period.

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Table 5: Total emissions compared to emissions for the grow-out period

Study	Grow-out emissions	Total emissions	Total emissions / grow-out emissions
Moore et al. (2011)[76]	28.37 g NH_3/bird	37.46 g NH_3/bird	1.32
EPA (2012), California barns[77]	4,049.48 kg NH_3	4,466.41 kg NH_3	1.10
EPA (2012), Kentucky barns[78]	3,619.62 kg NH_3	4,373.08 kg NH_3	1.21
Average ratio (scaling factor)			***1.21***

Table 6: Total emissions rates compared to emissions rates for the grow-out period

Study	Grow-out emissions rate, g/bird-day	Total emissions rate, g/bird-day	Total emissions rate / grow-out emissions rate
Moore et al. (2011)[79]	0.56[80]	0.51[81]	0.91
EPA (2012), California barns[82]	0.50[83]	0.46[84]	0.92
EPA (2012), Kentucky barns[85]	0.56[86]	0.52[87]	0.95
Average ratio (scaling factor)			***0.93***

Using the scaling factors shown in Tables 5 and 6, we combined the emissions estimates from Table 3 with adjusted emissions estimates from Table 4 to derive average emissions factors from all of the literature values. Table 7 shows this derivation.

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Table 7: Combined emissions factors

Study	Grams of ammonia per bird, per day	Grams of ammonia per bird marketed	Grams of ammonia per kg of market weight
EPA (2012),[88] CA	0.46	29.0	11.0
EPA (2012), KY	0.52	35.4	12.5
Moore et al. (2011)[89]	0.51	37.5	14.5
Lacey et al. (2003)[90]	0.59	37.5	15.6
Siefert et al. (2004)[91]	0.84	45.7	*not available*
Wheeler et al. (2006),[92] PA	0.52	28.4	13.0
Wheeler et al. (2006), KY	0.81	59.9	20.3
Siefert and Scudlark (2008)[93]	0.11	6.3	*not available*
Miles et al. (2014)[94]	0.50	28.4	12.6
Average value	**0.54**	**34.3**	**14.2**

Note: Highlighted cells are based on values in Table 4, but adjusted with the scaling factors shown in Tables 5 and 6.

The studies shown in Table 7 are mutually consistent, which increases the reliability of the combined estimates. Most studies predict daily emissions of between 0.4 and 0.6 grams of ammonia per bird. The lowest (0.11 grams per bird per day) and highest (0.84 grams per bird per day) estimates were both generated by Siefert et al., and do not change the overall average value. Similarly, total emissions are generally in the range of 30-60 grams of ammonia per bird, or 10-20 grams of ammonia per kilogram of broiler weight. In short, the range of estimates is generally within a factor of two, which is comparable to (or better) than the data used to develop emissions factors for most other industries.[95]

Broiler Emissions in the Chesapeake Bay Watershed

Using the emissions factors derived in the preceding sections and the broiler statistics shown in Appendix A, we estimated the ammonia emissions from broiler confinements in the Chesapeake Bay states in 2002, 2007 and 2012 (all years for which broiler inventory data are available), and also 2016 (the most recent year with production statistics). Table 8

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compares our estimates with emissions estimated using the most recent obtainable EPA method (the 2011 NEI method). It should be noted that the 2011 NEI method and our inventory-based emissions factor can be directly compared, as they both use broiler inventory statistics. The NEI method is equivalent to 0.27 grams of ammonia per bird, per day. Based on the monitoring data described above, EPA's NEI factor is much too low, and the true factor should be roughly twice as large, at 0.54 grams of ammonia per bird, per day. Total emissions estimates presented in Table 8 reflect this difference.

Table 8: Ammonia emissions (tons) from broiler confinements in the Chesapeake Bay states using different emissions factors

	2011 NEI method	Emissions factors derived from monitoring data, as described above		
Year	8.32E-03 kg NH_3/bird-month	0.54 g NH_3/bird-d	34.3 g NH_3/bird marketed	14.2 g NH_3/kg of market weight
2002	19,370	38,239	38,944	37,460
2007	22,088	43,605	38,981	40,314
2012	20,888	41,237	38,339	40,861
2016			41,628	47,009

Table 8 shows that broiler confinements in the Chesapeake Bay watershed emit roughly 40,000 tons of ammonia each year, and that the amount is increasing over time. The three emissions factors that we derived produce roughly comparable results, within 5 or 10 percent of each other, for any given year. Table 8 also shows that the NEI emissions factor for broiler operations is outdated and too low, estimating half as much ammonia as the three factors that we derived.

Discussion

We estimate that broiler confinements in the Chesapeake Bay watershed emit roughly 40,000 tons of ammonia each year. For comparison, the 2014 NEI estimated that ammonia emissions from all livestock waste totaled 96,000 tons,[96] and EPA's most recent estimate of ammonia *deposition* in the watershed is 81,000 tons.[97] Broilers are clearly a large part of the ammonia problem, and it is important that the Bay model get this part of the puzzle right. An outdated emissions factor based on European agricultural practices is not the right fit for today's Chesapeake Bay.

It helps to frame these estimates in terms of a typical broiler CAFO. We have previously reported on data found in "Annual Implementation Reports" for broiler CAFOs on Maryland's Eastern Shore.[98] Based on these reports, a typical Eastern Shore broiler CAFO

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might have an inventory of 110,000 broilers and raise 4.8 flocks per year. If we assume 3% mortality,[99] this CAFO would produce 512,160 broilers per year, at an average weight of about 6 pounds (see Appendix A), thus producing just over 3 million pounds of broilers per year. According to the 2011 NEI emissions factor, this CAFO would emit 12 tons of ammonia per year. According to the emissions factors that we derived, this CAFO would actually emit between 19 and 24 tons of ammonia per year.

Our estimates are based on monitoring studies, but they agree well with mass-balance estimates of ammonia emissions. Coufal et al. (2006) measured all nitrogen inputs and outputs over eighteen flocks at a Texas broiler barn.[100] Overall, these authors determined that ammonia losses totaled 13.5 grams per kilogram of broiler weight,[101] very close to our estimated emissions factor of 14.2 grams per kilogram (Table 7).

The use of litter amendments can help to reduce ammonia emissions to some degree. For example, in a doctoral dissertation on this topic, Senyondo found that small experimental broiler flocks treated with a biodegradable litter amendment made from corn cobs had ammonia emission that were, on average, 27% lower than control flocks.[102] The effectiveness diminished over the course of five flocks as the litter was left in place, and by the fifth flock the treatment emissions were actually higher than the control emissions.[103] Another study evaluated the effectiveness of three alum treatments, and found that average weekly emissions were between 9 and 34% lower from alum-treated barns than from a control barn.[104]

Some of the studies that we included in this report did not use litter amendments (e.g., the EPA NAEMS study), others included a mix of barns that did or did not used litter amendments (e.g., Wheeler et al., 2006),[105] and others did not specify whether amendments were used. If the use of litter amendments is more widespread in the Chesapeake Bay watershed than it was in the studies we evaluated, then actual emissions may be slightly lower than we predict. However, this variable does not significantly affect our conclusions: We do not know the extent of litter amendment in the Bay watershed, but even if its use is widespread, the resulting reduction in emissions is presumably less than a third (since at least some of the data in this report was based on amended litter). This means that even in a best-case scenario, emissions are still significantly higher than EPA has traditionally assumed.

Given the possibility that EPA is underestimating a significant component of the Chesapeake Bay's nitrogen load, the Agency should more clearly explain how much ammonia it assumes to be escaping from broiler confinements. If EPA is still relying on outdated emissions factors based on European agricultural practices, it should revise its assumptions to reflect what we now know about ammonia emissions from American broiler operations.

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Appendix A: Broiler statistics for the Chesapeake Bay Watershed

Data for inventory and birds sold through 2012 are from the USDA Census of Agriculture, which is compiled every five years.[106] Data for pounds of broilers produced, and for birds sold in 2016, are from USDA Poultry Production and Value summaries, which are produced each year.[107]

Table A1: Inventory and production of broiler chickens in Chesapeake Bay states

Inventory (millions of birds)	MD	VA	PA	DE	WV	TOTAL
2002	51.1	45.4	21.6	45.6	12.2	176.0
2007	65.5	43.7	27.5	51.1	12.8	200.7
2012	64.2	38.4	29.2	43.2	14.8	189.8
Production (millions of birds sold)	MD	VA	PA	DE	WV	TOTAL
2002	287.1	266.1	132.5	255.9	88.7	1,030
2007	296.4	249.2	150.1	246.1	88.8	1,031
2012	304.7	237.7	166.7	211.6	93.7	1,014
2016	303.5	269.1	185.7	252.5	90.3	1,101
Production (millions of pounds)	MD	VA	PA	DE	WV	TOTAL
2002	1,381.4	1,330.4	701.2	1,494.7	368.2	5,276
2007	1,591.9	1,301.0	831.6	1,597.7	355.6	5,678
2012	1,604.8	1,306.8	962.1	1,505.2	376.0	5,755
2016	1,851.4	1,533.9	1,039.9	1,843.3	352.2	6,621
Average bird size (lbs)	MD	VA	PA	DE	WV	AVERAGE
2002	4.8	5.0	5.3	5.8	4.2	5.1
2007	5.4	5.2	5.5	6.5	4.0	5.5
2012	5.3	5.5	5.8	7.1	4.0	5.7
2016	6.1	5.7	5.6	7.3	3.9	6.0

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Appendix B: Deriving production-based ammonia emissions factors from the California NAEMS study

The National Air Emissions Monitoring Study (NAEMS) included two broiler studies, one in California and one in Kentucky.[108] The Kentucky study authors provided summary estimates of ammonia emissions per bird marketed and bird kilogram of bird weight.[109] The California study did not provide comparable estimates, but did provide raw data from which these estimates can be derived. Figure B1, below, shows an example of the California data. At the end of a flock cycle, the inventory typically declines gradually and then drops off sharply; in Figure B1, house H10 had 20,463 birds on April 11-14, and then 2,558 on the next day (April 15). We assumed that the number of birds produced in each flock cycle was the last 'large' inventory number. In Figure B1, for example, we would assume that 20,463 birds were sold on April 14-15, each weighing an average of 2.69 kilograms.

Daily emissions estimates included both days with broilers in the barns ("grow-out" period), and days between flocks ("clean-out" or "decaking" period), but were only available for 60% of the 792-day study period. To estimate total emissions over all 792 days, we multiplied the average daily emissions estimate for each barn by the total number of study days, under the assumption that the days with emissions estimates were representative of the days without emissions estimates. With these assumptions in mind, Table B1 shows the calculation of production-based emissions estimates for the two California barns.

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Figure B1: Sample animal characteristic data for California broiler barns in the NAEMS study.[110]

Table E2. Daily means of animal characteristics at Site CA1B for April, 2008.

Day	House 10			House 12		
	Inventory	Mass, kg	kg m^{-2}	Inventory	Mass, kg	kg m^{-2}
1	20,622	1.69	22.9	20,717	1.69	23.0
2	20,611	1.77	24.0	20,699	1.77	24.1
3	20,598	1.86	25.1	20,683	1.86	25.2
4	20,581	1.94	26.1	20,668	1.94	26.2
5	20,564	2.02	27.2	20,652	2.02	27.3
6	20,548	2.10	28.3	20,635	2.10	28.4
7	20,528	2.18	29.3	20,613	2.18	29.4
8	20,517	2.25	30.3	20,591	2.25	30.4
9	20,501	2.33	31.3	20,573	2.33	31.4
10	20,481	2.41	32.3	20,553	2.41	32.4
11	20,463	2.48	33.3	20,536	2.48	33.4
12	20,463	2.55	34.2	20,536	2.55	34.3
13	20,463	2.62	35.1	20,536	2.62	35.3
14	20,463	2.69	36.0	20,536	2.69	36.2
15	2,558			4,706		
16	0			0		
17	0			0		
18	0			0		
19	0			0		
20	0			0		
21	0			0		
22	16,433	0.08	1.1	12,968		
23	21,259	0.07	0.9	21,360	0.07	1.0
24	21,249	0.06	0.8	21,320	0.06	0.8
25	21,231	0.06	0.8	21,294	0.06	0.8
26	21,220	0.06	0.8	21,274	0.06	0.8
27	21,205	0.07	0.9	21,250	0.07	0.9
28	21,188	0.08	1.1	21,218	0.08	1.1
29	21,178	0.10	1.4	21,190	0.10	1.3
30	21,161	0.12	1.7	21,174	0.12	1.6
Avg	15,870	1.37	18.5	15,876	1.43	19.3
n	30	23	23	30	22	22
SD	8,604	1.07	14.3	8,346	1.05	14.2
Min	0	0.06	0.8	0	0.06	0.8
Max	21,259	2.69	36.0	21,360	2.69	36.2

Table B1: Calculating production-based ammonia emissions factors.

H10				H12			
Flock end date	birds produced	average bird mass, kg	kg produced	Flock end date	birds produced	average bird mass, kg	kg produced
11/2/2007	20,516	2.48	50,880	11/2/2007	20,516	2.48	50,880
12/30/2007	20,705	2.62	54,247	1/1/2008	18,802	2.75	51,706
2/21/2008	19,631	2.61	51,237	2/20/2008	20,364	2.68	54,576
4/14/2008	20,463	2.69	55,045	4/14/2008	20,536	2.69	55,242
6/6/2008	18,952	2.63	49,844	6/5/2008	20,590	2.55	52,505
7/31/2008	19,822	2.75	54,511	7/31/2008	20,386	2.76	56,265
9/26/2008	20,799	2.68	55,741	9/26/2008	19,102	2.68	51,193
12/3/2008	20,951	2.56	53,635	12/3/2008	20,811	2.55	53,068
1/27/2009	20,625	2.68	55,275	1/27/2009	20,821	2.69	56,008
3/27/2009	20,514	2.68	54,978	3/26/2009	20,348	2.61	53,108
5/26/2009	20,165	2.68	54,042	5/26/2009	20,474	2.68	54,870
7/20/2009	20,055	2.62	52,544	7/20/2009	20,174	2.69	54,268
9/13/2009	18,662	2.61	48,708	9/13/2009	18,657	2.63	49,068
TOTAL	261,860		690,686	TOTAL	261,581		692,757
		total study days	792			total study days	792
		average daily ammonia emissions (g/d)	10,208			average daily ammonia emissions (g/d)	8,958
		g NH3 for the study period	8,084,736			g NH3 for the study period	7,094,736
		g NH3/bird produced	30.9			g NH3/bird produced	27.1
		g NH3/kg market weight	11.7			g NH3/kg market weight	10.2

Note: Data were taken from the California study report.[111] *"Birds produced" and "average bird mass" were assumed to be equal to the last day in a flock cycle with a large number of birds. Highlighted cells in the following table were calculated from the raw data.*

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Notes

[1] U.S. EPA, Chesapeake Bay Total Maximum Daily Load for Nitrogen, Phosphorus and Sediment, Appendix L, page L-2 (Dec. 29, 2010).

[2] Id.

[3] Id. at page L-16, Table L-3.

[4] The Bay watershed model does not present atmospheric deposition estimates for most of the watershed; instead, these are counted with the various land uses on which the nitrogen deposits. Jeff Sweeney at the Bay Program offered to extract the deposition numbers for us.

[5] See, e.g., Y. Li et al., Increasing importance of deposition of reduced nitrogen in the United States, 113 PNAS 5874-5879 (May 24, 2016).

[6] See, e.g., J.A. Koziel et al., Gas-to-particle conversion process between ammonia, acid gases, and fine particles in the atmosphere, Agricultural and Biosystems Engineering Publications 67 (2006), available at http://lib.dr.iastate.edu/abe_eng_pubs/67/?utm_source=lib.dr.iastate.edu%2Fabe_eng_pubs%2F67&utm_medium=PDF&utm_campaign=PDFCoverPages.

[7] R.W. Pinder et al., Environmental impact of atmospheric NH_3 emissions under present and future conditions in the eastern United States, 35 Geophysical Research Letters L12808 (2008).

[8] U.S. EPA, 2014 National Emissions Inventory (NEI) Data, https://www.epa.gov/air-emissions-inventories/2014-national-emissions-inventory-nei-data (accessed Nov. 7, 2016).

[9] U.S. EPA, Chesapeake Bay Total Maximum Daily Load for Nitrogen, Phosphorus and Sediment, Appendix L, page L-14 (Dec. 29, 2010).

[10] U.S. EPA, National Emission Inventory—Ammonia

Emissions from Animal Husbandry Operations, Draft Report, Table 3-7 (Jan. 30, 2004), https://www3.epa.gov/ttnchie1/ap42/ch09/related/nh3inventorydraft_jan2004.pdf

[11] Carnegie Mellon University, CMU Ammonia Emission Inventory for the Continental United States, https://www.cmu.edu/ammonia/; A.M. McQuilling and P.J. Adams, Semi-empirical process-based models for ammonia emissions from beef, swine, and poultry operations in the United State, 120 *Atmospheric Environ.* 127 (2015)

[12] U.S. EPA, Development of Emissions Estimating Methodologies for Broiler Operations (Draft) (Feb. 2012) (hereinafter "Draft EEM").

[13] Draft EEM at 7-1 and 7-49.

[14] USDA Census of Agriculture, https://www.agcensus.usda.gov/Publications/2012/.

[15] *See, e.g.*, P. Moore et al., Ammonia Emissions Factors from Broiler Litter in Barns, in Storage, and after Land Application, 40 J. Environ. Quality 1395, 1398 (2011).

[16] U.S. EPA, National emission inventory, ammonia emissions from animal agricultural operations (revised draft report), at 3-15, Table 3-8 (2004).

[17] Id. at D-13, Table D-12.

[18] D.M. Miles et al., Ammonia and Nitrous Oxide Emissions from a Commercial Broiler House, 43 *J Environ. Quality* 1119, 1120 (2014); E.F. Wheeler et al., Ammonia Emissions from Twelve U.S. Broiler Chicken Houses, 1511, 49 *Transactions of the ASABE* 1495, 1511 (2006).

[19] E.F. Wheeler et al., Ammonia Emissions from Twelve U.S. Broiler Chicken Houses, 49 *Transactions of the ASABE* 1495, 1511 (2006).

[20] R.L. Siefert et al., Characterization of Atmospheric Ammonia Emissions from a Commercial Chicken House on the Delmarva Peninsula, 38 *Environ. Sci. Technol.* 2769, 2777 (2004).

[21] E.F. Wheeler et al., Ammonia Emissions from Twelve U.S. Broiler Chicken Houses, 49 *Transactions of the ASABE* 1495, 1510 (2006).

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[22] Id. at 1510, Table 4, converted from g NH_3 b^{-1} d^{-1}. The range of American values was 0.47-1.18 g NH_3 b^{-1} d^{-1}, while the range of European values was 0.09-0.48 g NH_3 b^{-1} d^{-1}.

[23] U.S. EPA, NEI technical documentation, 85, Table 3-33 (Aug. 2015), https://www.epa.gov/sites/production/files/2015-10/documents/nei2011v2_tsd_14aug2015.pdf. The report includes a link to county-specific emissions factors, but for broiler confinements all emissions factors were equal to 8.32E-03 kg NH_3/bird-month.

[24] U.S. EPA, 2014 National Emissions Inventory, version 1, Technical Support Document, 4-45 (Dec. 2016).

[25] U.S. EPA Chesapeake Bay Program, Atmospheric deposition of nitrogen in the Chesapeake: Integrating Air & Water Environmental Management, Chesapeake Bay TMDL 2017 Midpoint Assessment Webinar Series, slide 49 (Oct. 31, 2017), https://www.chesapeakebay.net/channel_files/25651/atmo_dep_webinar_draft_11-1-17.pdf.

[26] After repeated attempts, EPA staff were unable to answer this question.

[27] U.S. EPA, Development of Emissions Estimating Methodologies for Broiler Operations (Draft) (Feb. 2012) (hereinafter "Draft EEM").

[28] Id.

[29] Id. at 4-10.

[30] Draft EEM, Appendix D, Final Project Report on Southeastern Broiler Gaseous and Particulate Matter Emissions Monitoring (Dec, 2009), page 5

[31] Id. Calculated from 6.25 kg NH_3 per AU (defined on the same page as 500 kg of animal weight).

[32] P. Moore et al., Ammonia Emissions Factors from Broiler Litter in Barns, in Storage, and after Land Application, 40 J. Environ. Quality 1395, 1398 (2011).

[33] Id. at 1404, Table 3; the authors present separate estimates for the grow-out (28.37 g NH_3/bird) and between-flock (9.09 g NH_3 per bird) periods, which can be combined for a total of 37.46 g NH_3 per bird).

[34] Id. at 1398, Table 1.

[35] Draft EEM, Table 5-8.

[36] Id. at Table 5-7.

[37] Id. at Table 5-7.

[38] *See supra*, Table 2.

[39] *See supra*, Table 3.

[40] *See supra*, Table 3.

[41] Draft EEM, Table 5-8.

[42] Id. at Table 5-7.

[43] Id. at Table 5-7.

[44] *See supra*, Table 2.

[45] Draft EEM, Appendix D, Final Project Report on Southeastern Broiler Gaseous and Particulate Matter Emissions Monitoring (Dec, 2009), page 5.

[46] Id. Calculated from 6.25 kg NH_3 per AU (defined on the same page as 500 kg of animal weight).

[47] P. Moore et al., Ammonia Emissions Factors from Broiler Litter in Barns, in Storage, and after Land Application, 40 J. Environ. Quality 1395, 1398, Table 1 (2011).

[48] Id.

[49] Id. at 1399.

[50] Id., derived as described in the text of this report.

[51] Id. at 1404, Table 3.

[52] Id., calculated as average emissions per bird (37.46 grams, page 1404) divided by average bird weight (2.582 kg, page 1399).

[53] R.E. Lacey et al., Particulate Matter and Ammonia Emission Factors for Tunnel-Ventilated Broiler Production Houses in the Southern U.S., 46 *Transactions of the ASAE* 1203 (2003).

[54] R.L. Siefert and J.R. Scudlark, Determination of ammonia emission rates from a tunnel ventilated chicken house using passive samplers and a Gaussian dispersion model, 59 *J Atmos. Chem.* 99, 109 (2008).

[55] E.F. Wheeler et al., Ammonia Emissions from Twelve U.S. Broiler Chicken Houses, 49 *Transactions of the ASABE* 1495 (2006).

[56] D.M. Miles et al., Ammonia and Nitrous Oxide Emissions from a Commercial Broiler House, 43 *J Environ. Quality* 1119, 1123 (2014).

[57] R.E. Lacey et al., Particulate Matter and Ammonia Emission Factors for Tunnel-Ventilated Broiler Production Houses in the Southern U.S., 46 *Transactions of the ASAE* 1203 (2003).

[58] Id., calculated as per-bird emissions divided by flock age.

[59] Id., calculated as per-bird emissions divided by average bird weight.

[60] R.L. Siefert et al., Characterization of Atmospheric Ammonia Emissions from a Commercial Chicken House on the Delmarva Peninsula, 38 *Environ. Sci. Technol.* 2769 (2004).

[61] Id., converted from 0.74 grams of ammonia-nitrogen per bird per day (page 2777).

[62] Id., daily per-bird emissions factor multiplied by flock age (42 days).

[63] E.F. Wheeler et al., Ammonia Emissions from Twelve U.S. Broiler Chicken Houses, 49 *Transactions of the ASABE* 1495 (2006).

[64] Average of 0.47 and 0.65 g NH_3 b^{-1} d^{-1} (Wheeler et al., Table 4).

[65] Id., calculated as daily per-bird emission rate multiplied by average age of flock.

[66] Id., calculated as per-bird emissions divided by average weight.

[67] E.F. Wheeler et al., Ammonia Emissions from Twelve U.S. Broiler Chicken Houses, 49 *Transactions of the ASABE* 1495 (2006).

[68] Average of 0.76 and 0.98 g NH_3 b^{-1} d^{-1} (Wheeler et al., Table 4).

[69] Id., calculated for each Kentucky farm as daily per-bird emission rate multiplied by average age of flock, then averaged for both Kentucky farms.

[70] Id., calculated for each Kentucky farm as per-bird emissions divided by average weight, then averaged for both Kentucky farms.

[71] R.L. Siefert and J.R. Scudlark, Determination of ammonia emission rates from a tunnel ventilated chicken house using passive samplers and a Gaussian dispersion model, 59 J Atmos. Chem. 99 (2008).

[72] Id. at 113, converted from ammonia-nitrogen to ammonia.

[73] Id., converted from ammonia-nitrogen to ammonia.

[74] D.M. Miles et al., Ammonia and Nitrous Oxide Emissions from a Commercial Broiler House, 43 J Environ. Quality 1119, 1123 (2014).

[75] Id., calculated as per-bird emissions divided by average weight.

[76] P. Moore et al., Ammonia Emissions Factors from Broiler Litter in Barns, in Storage, and after Land Application, 40 J. Environ. Quality 1395, 1404 (2011).

[77] Draft EEM at 5-14 – 5-16.

[78] Id.

[79] P. Moore et al., Ammonia Emissions Factors from Broiler Litter in Barns, in Storage, and after Land Application, 40 J. Environ. Quality 1395, 1404 (2011).

[80] Id., calculated as grow out emissions per bird (page 1404, Table 3) divided by average flock age of 50.4 days (page 1398, Table 1).

[81] See section 3(a)(ii) of this report.

[82] Draft EEM at 5-14 – 5-16.

[83] Id., calculated as grow-out emissions rate (grams per day, Table 5-12) divided by inventory numbers (Table 4-3).

[84] See supra, Table 2.

[85] Id.

[86] Draft EEM, calculated as grow-out emissions rate (grams per day, Table 5-12) divided by inventory numbers (Table 4-3).

[87] See supra, Table 2.

[88] U.S. EPA, Development of Emissions Estimating Methodologies for Broiler Operations (Draft) (Feb. 2012).

[89] P. Moore et al., Ammonia Emissions Factors from Broiler Litter in Barns, in Storage, and after Land Application, 40 J. Environ. Quality 1395 (2011).

[90] R.E. Lacey et al., Particulate Matter and Ammonia Emission Factors for Tunnel-Ventilated Broiler Production Houses in the Southern U.S., 46 *Transactions of the ASAE* 1203 (2003).

[91] R.L. Siefert et al., Characterization of Atmospheric Ammonia Emissions from a Commercial Chicken House on the Delmarva Peninsula, 38 *Environ. Sci. Technol.* 2769 (2004).

[92] E.F. Wheeler et al., Ammonia Emissions from Twelve U.S. Broiler Chicken Houses, 49 *Transactions of the ASABE* 1495 (2006).

[93] R.L. Siefert and J.R. Scudlark, Determination of ammonia emission rates from a tunnel ventilated chicken house using passive samplers and a Gaussian dispersion model, 59 J Atmos. Chem. 99 (2008).

[94] D.M. Miles et al., Ammonia and Nitrous Oxide Emissions from a Commercial Broiler House, 43 J Environ. Quality 1119 (2014).

[95] See, e.g., U.S. EPA, Emission Factor Documentation for AP-42 Section 13.2.2, Unpaved Roads, Final Report, at 3-12 (Sep., 1998), available at https://www3.epa.gov/ttnchie1/ap42/ch13/bgdocs/b13s02-2.pdf ("The level of variability within an emission factor data set is defined in terms of the spread of the original emission factor data values about the mean or median single-valued factor for the source category. The fairly rigorous criterion that all data points must lie within a factor of two of the central value was adopted").

[96] U.S. EPA, 2014 National Emissions Inventory, https://www.epa.gov/air-emissions-inventories/2014-national-emissions-inventory-nei-data (total of ammonia emissions from livestock waste for Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia, and Washington, DC).

[97] U.S. EPA Chesapeake Bay Program, Chesapeake Bay Midpoint Assessment Progress, Tracking, Graphical interface to the Phase 6 Watershed Model Inputs: Atmospheric Deposition Data, Atmospheric Deposition Map, https://mpa.chesapeakebay.net/AtmoDepData.html (last accessed Dec. 7, 2017). Total reduced nitrogen deposition (66,787 tons) was converted to total ammonia deposition (81,208 tons).

[98] EIP, More Phosphorus, Less Monitoring (Sep. 8, 2015), available at http://www.environmentalintegrity.org/wp-content/uploads/2016/11/Poultry-report_2013.pdf.

[99] See, e.g., D.M. Miles et al., Ammonia and Nitrous Oxide Emissions from a Commercial Broiler House, 43 J Environ. Quality 1119, 1120 (2014) (2.6% mortality); R.L. Siefert et al., Characterization of Atmospheric Ammonia Emissions from a Commercial Chicken House on the Delmarva Peninsula, 38 *Environ. Sci. Technol.* 2769, 2772 (2004) (3% mortality).

[100] C.D. Coufal et al., *Nitrogen Emissions from Broilers Measured by Mass Balance Over Eighteen Consecutive Flocks*, 85 Poultry Science 384 (2006).

[101] *Id.* at 388, converted from 11.07 grams of nitrogen per kilogram of broiler weight, using the authors' assumption that virtually all gaseous nitrogen losses would be in the form of ammonia (*Id.* at 390).

[102] N.S. Senyondo, Mitigation of Ammonia Emissions from Broiler Houses Using a Biodegradable Litter Amendment, Dissertation submitted to the faculty of Virginia Polytechnical Institute, 63, 81 (Apr. 3, 2013).

[103] Id.

[104] P.A. Moore et al., Evaluation of Ammonia Emissions from Broiler Litter, Livestock Environment VIII, Proceedings of the 31 August – 4 September 2008 Conference (Aug. 31, 2008). The authors state that average weekly emissions were reduced by 26-47%, but the data shown in Table 2 show actual reductions of 9-34%.

[105] E.F. Wheeler et al., Ammonia Emissions from Twelve U.S. Broiler Chicken Houses, 49 *Transactions of the ASABE* 1495, 1497 (2006). Broiler flocks with and without litter amendments were grouped together in this study, so the effects of amendments could not be ascertained.

[106] USDA Census of Agriculture, https://www.agcensus.usda.gov/Publications/2012/.

[107] USDA, Poultry Production and Value, http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1130.

[108] Draft EEM.

[109] Id. at Appendix D, Final Project Report on Southeastern Broiler Gaseous and Particulate Matter Emissions Monitoring (Dec, 2009), page 5.

[110] Draft EEM, Appendix D, Emissions Data from two Broiler Chicken Houses in California, 76 (July 2, 2010).

[111] Id.

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1000 Vermont Avenue, NW
Suite 1100
Washington, DC 20005
202-296-8800
www.environmentalintegrity.org

Message

From: Jennings, Kim [Jennings.Kim@epa.gov]
Sent: 11/2/2017 1:07:48 PM
To: Mortensen, Ginah [mortensen.ginah@epa.gov]; Adkins, Tabatha [Adkins.Tabatha@epa.gov]; Ager, Sara [Ager.Sara@epa.gov]; Allnutt, David [Allnutt.David@epa.gov]; amend, carol [amend.carol@epa.gov]; Arvizu, Christy [Arvizu.Christy@epa.gov]; Back, Tracy [back.tracy@epa.gov]; Bartenfelder, David [Bartenfelder.David@epa.gov]; Baumgartner, Donald [baumgartner.donald@epa.gov]; Bishop, Debbie [Bishop.Debbie@epa.gov]; Bloom, Judy [Bloom.Judy@epa.gov]; Boos, Gerard [Boos.Gerard@epa.gov]; Bravo, Antonio [Bravo.Antonio@epa.gov]; Breedlove, Dan [Breedlove.Dan@epa.gov]; Brown, Dan [Brown.Dan@epa.gov]; Burchard, Robert [Burchard.Robert@epa.gov]; Burns, Ward [Burns.Ward@epa.gov]; Butler, John [Butler.JohnJ@epa.gov]; Cabrera-Stagno, Valentina [Cabrera-Stagno.Valentina@epa.gov]; Carter-Jenkins, Shakeba [Carter-Jenkins.Shakeba@epa.gov]; Coats, Andrea [Coats.Andrea@epa.gov]; Collins, Jerry [collins.jerry@epa.gov]; Costa, Allison [Costa.Allison@epa.gov]; Daniels, Jason [Daniels.Jason@epa.gov]; DeHaven, Leigh [DeHaven.Leigh@epa.gov]; Downing, Jane [Downing.Jane@epa.gov]; Drake, Wendy [drake.wendy@epa.gov]; Dunkins, Robin [Dunkins.Robin@epa.gov]; Dunlevy, Robert [Dunlevy.Robert@epa.gov]; Dygowski, Laurel [Dygowski.Laurel@epa.gov]; Fenton, Kathleen [Fenton.Kathleen@epa.gov]; Fergusson, Bruce [Fergusson.Bruce@epa.gov]; Figueroa, Zaida [Figueroa.Zaida@epa.gov]; Fisher, Jacqueline [Fisher.Jacqueline@epa.gov]; Fitz, Nancy [Fitz.Nancy@epa.gov]; Flahive, Katie [Flahive.Katie@epa.gov]; Frizzell, Damon [Frizzell.Damon@epa.gov]; Galloway, Carol [Galloway.Carol@epa.gov]; Gargas, Toni [Gargas.Toni@epa.gov]; Gilbert, Neal [Gilbert.Neal@epa.gov]; Gould, Stephen [Gould.Stephen@epa.gov]; Gratz, Jeff [Gratz.Jeff@epa.gov]; Greenwald, Kathryn [Greenwald.Kathryn@epa.gov]; greg.johnson@por.usda.gov; Grier, Gina [Grier.Gina@epa.gov]; Grisier, Mary [Grisier.Mary@epa.gov]; Gunter, Jason [gunter.jason@epa.gov]; Halstead, Amanda [halstead.amanda@epa.gov]; Hamera, Donald [Hamera.Don@epa.gov]; Hart, Debbi [Hart.Debbi@epa.gov]; Heinemann, Kristina [Heinemann.Kristina@epa.gov]; Horak, David [horak.david@epa.gov]; Horchem, Brad [horchem.brad@epa.gov]; Howard, MarkW [Howard.MarkW@epa.gov]; Howland, Sanda [Howland.Sanda@epa.gov]; Hubert, Gayle [Hubert.Gayle@epa.gov]; Hyde, Tinka [hyde.tinka@epa.gov]; Jackson, Robert W. [Jackson.Robertw@epa.gov]; Jacobs, Kira [Jacobs.Kira@epa.gov]; Johnson, James [Johnson.James@epa.gov]; Kasai, Jeanne [Kasai.Jeanne@epa.gov]; Schefski, Melissa [Schefski.Melissa@epa.gov]; Keaney, Kevin [Keaney.Kevin@epa.gov]; Koethe, Robert [Koethe.Robert@epa.gov]; Krudner, Maureen [Krudner.Maureen@epa.gov]; Kupchan, Simma [Kupchan.Simma@epa.gov]; Lamb, Brad [Lamb.Brad@epa.gov]; Lancaster, Kris [Lancaster.Kris@epa.gov]; Larsen, Erika [Larsen.Erika@epa.gov]; Lehman, Stuart [Lehman.Stuart@epa.gov]; Lemieux, Paul [Lemieux.Paul@epa.gov]; LEVIN, NANCY [Levin.Nancy@epa.gov]; Longo, Linda [Longo.Linda@epa.gov]; Lubbe, Wendy [Lubbe.Wendy@epa.gov]; MacIntyre, Mark [Macintyre.Mark@epa.gov]; Mahoney, Michele [Mahoney.Michele@epa.gov]; Matthews, Mark [Matthews.Mark@epa.gov]; McCullough, Hugh [McCullough.Hugh@epa.gov]; Mitschele, Becky [Mitschele.Becky@epa.gov]; Moore, Audrey [Moore.Audrey@epa.gov]; Moses, Althea [Moses.Althea@epa.gov]; Nuhfer, Mark [Nuhfer.Mark@epa.gov]; Olszyk, David [Olszyk.David@epa.gov]; Ostigaard, Crystal [Ostigaard.Crystal@epa.gov]; Peak, Nicholas [Peak.Nicholas@epa.gov]; Perreault, Peg [Perreault.Peg@epa.gov]; Perrin, Rebecca [Perrin.Rebecca@epa.gov]; Peterson, Samuel [Peterson.Samuel@epa.gov]; Phillips, Todd [Phillips.Todd@epa.gov]; Pierce, Troy [Pierce.Troy@epa.gov]; Pinkerton, Kate [Pinkerton.Kate@epa.gov]; Plymale, Chris [Plymale.Christopher@epa.gov]; Pollard, Stephen [Pollard.Stephen@epa.gov]; Pont, Richard [Pont.Richard@epa.gov]; Porter, Donna [Porter.Donna@epa.gov]; Rao, Kate [Rao.kate@epa.gov]; Ridley, Caroline [Ridley.Caroline@epa.gov]; Rise, David [rise.david@epa.gov]; Roberto, Joseph [Roberto.Joseph@epa.gov]; Roberts, Rickey [Roberts.Rickey@epa.gov]; Sampath, Sam [Sampath.Sam@epa.gov]; Sarokin, David [Sarokin.David@epa.gov]; Schademann, Randy [Schademann.Randy@epa.gov]; Schafer, Jeannette [schafer.jeannette@epa.gov]; Schrock, Bill [Schrock.Bill@epa.gov]; Shenk, Kelly [shenk.kelly@epa.gov]; Shields, Amy [Shields.Amy@epa.gov]; Socha, Julianne [socha.julianne@epa.gov]; Spaulding, William [spaulding.william@epa.gov]; Sperry, Clint [Sperry.Clint@epa.gov]; Stevenson, Michelle [Stevenson.Michelle@epa.gov]; Stevenson, Suzanne [Stevenson.Suzanne@epa.gov]; Stoy, Alyse [Stoy.Alyse@epa.gov]; Suffian, Fred [Suffian.Fred@epa.gov]; Sullivan, Tim [Sullivan.Tim@epa.gov]; Swackhammer, J-Troy [Swackhammer.J-Troy@epa.gov]; Szylvian, Andrea M. [Szylvian.Andrea@epa.gov]; Tankersley, Julie [Tankersley.Julie@epa.gov]; Terada, Derrick [Terada.Derrick@epa.gov]; Thilsted, Eugene [Thilsted.Eugene@epa.gov]; Thomas, Derval [Thomas.Derval@epa.gov]; Thomas, Paul [thomas.paul@epa.gov]; Urban, Trevor [Urban.Trevor@epa.gov]; Utting, George [Utting.George@epa.gov]; VanTil, Barbara [vantil.barbara@epa.gov]; Weiler, Gregory [weiler.gregory@epa.gov]; Weinberg, Anne [Weinberg.Anne@epa.gov]; Werntz, James [Werntz.James@epa.gov]; Wilkinson, Bruce [wilkinson.bruce@epa.gov]; Winiecki, Eric [Winiecki.Eric@epa.gov]; Winn, G. Dean [winn.gerald@epa.gov]; Winnett, Steven [winnett.steven@epa.gov]; Yaras, Michelle [Yaras.Michelle@epa.gov]; Young, Carl [young.carl@epa.gov]; Ziegler, Sam [Ziegler.Sam@epa.gov];

Zimmer, Andrea [Zimmer.Andrea@epa.gov]; Zimmerman, Dea [Zimmerman.Dea@epa.gov]; Bonnelycke, Nina [Bonnelycke.Nina@epa.gov]; Whitehurst, Shanika [whitehurst.shanika@epa.gov]; Subramanian, Hema [Subramanian.Hema@epa.gov]; Arling, Michelle [Arling.Michelle@epa.gov]; Green, Holly [Green.Holly@epa.gov]; Edmondson, Lucy [Edmondson.Lucy@epa.gov]; Robertson, Duane [Robertson.Duane@epa.gov]; Woodward, Cheryl [Woodward.Cheryl@epa.gov]; Jones-Johnson, Shea [Jones-Johnson.Shea@epa.gov]; Palomares, Art [Palomares.Art@epa.gov]; Lynch, Katie [Lynch.Katie@epa.gov]; ted.strauss@ca.usda.gov; johnnie.siliznoff@ca.usda.gov; O'Donnell, Thomas K. [ODonnell.Thomas@epa.gov]; Gioffre, Patricia [Gioffre.Patricia@epa.gov]; Roberts, Connie [Roberts.Connie@epa.gov]; Aaron, Mark [aaron.mark@epa.gov]; McGown, Michael [McGown.Michael@epa.gov]; Comerford, Sherri [Comerford.Sherri@epa.gov]; Carbone, Chad [Carbone.Chad@epa.gov]; Taylor, Timothy [Taylor.Timothy@epa.gov]; Summerlin, Joe [summerlin.joe@epa.gov]; Spence, Kelley [Spence.Kelley@epa.gov]; Billups, Angie [Billups.Angie@epa.gov]; Melanson, Kate [Melanson.Kate@epa.gov]; Perkins, Stephen [Perkins.Stephen@epa.gov]; Taylor, TeAndra [Taylor.TeAndra@epa.gov]; Quigley, Heather [Quigley.Heather@epa.gov]; Murdie, Ashley [murdie.ashley@epa.gov]; Park, Jennifer [park.jennifer@epa.gov]; Calvo, Estrella [calvo.estrella@epa.gov]; Rush, Randall [Rush.Randall@epa.gov]; Giddings, Daniel [giddings.daniel@epa.gov]; OBrien, Wendy [OBrien.Wendy@epa.gov]; Farris, Laura [Farris.Laura@epa.gov]; Ferris, Lena [Ferris.Lena@epa.gov]; Williams, Joe [Williams.Joe@epa.gov]; Flournoy, Karen [Flournoy.Karen@epa.gov]; LUEHE, DOUGLAS [luehe.douglas@epa.gov]; Holst, Linda [holst.linda@epa.gov]; Damico, Brian [Damico.Brian@epa.gov]; gfritz@usgs.gov; jcoles@usgs.gov; mdraper@nifa.usda.gov; sjkalkho@usgs.gov; Carlson, Christopher -FS [ccarlson@fs.fed.us]; Greg Zwicke [greg.zwicke@ftc.usda.gov]; jwfrey@usgs.gov; karma.anderson@por.usda.gov; Anderson-Carnahan, Linda [Anderson-Carnahan.Linda@epa.gov]; Carlson, Rachel [Carlson.Rachel@epa.gov]; Lawrence, Patty - NRCS, Washington, DC [Patty.Lawrence@wdc.usda.gov]; Freeman, Tamara [Freeman.Tamara@epa.gov]; Aspy, Dale [Aspy.Dale@epa.gov]; Bassett, Jay [Bassett.Jay@epa.gov]; Bingham, Kimberly [Bingham.Kimberly@epa.gov]; Cheeks, Thornell [Cheeks.Thornell@epa.gov]; Davis, Molly [Davis.Molly@epa.gov]; Davis, Scott [Davis.ScottR@epa.gov]; Fifadara, Dipesh [Fifadara.Dipesh@epa.gov]; Gillam, Rick [Gillam.Rick@epa.gov]; Huey, Joel [Huey.Joel@epa.gov]; Johnston, Jon [Johnston.Jon@epa.gov]; Laycock, Kelly [Laycock.Kelly@epa.gov]; Newbold, Amy [Newbold.Amy@epa.gov]; Powell, Alan [Powell.Alan@epa.gov]; Strange, Joel [Strange.Joel@epa.gov]; Thomas, Chris [Thomas.Chris@epa.gov]; Webster, James [Webster.James@epa.gov]; Wylie, Mike [Wylie.Mike@epa.gov]; Echeverria, Marietta [Echeverria.Marietta@epa.gov]; Goodis, Michael [Goodis.Michael@epa.gov]; Ziobro, Joseph [Ziobro.Joseph@epa.gov]; Melnick, Rachel - NIFA [RMelnick@nifa.usda.gov]; Helder, Dirk [Helder.Dirk@epa.gov]; Murphy, Jim [Murphy.Jim@epa.gov]; Sands, Jeffrey [sands.jeffrey@epa.gov]; Jacob, Sicy [Jacob.Sicy@epa.gov]; Sanzone, Stephanie [Sanzone.Stephanie@epa.gov]

CC: Ellington, Natalie [Ellington.Natalie@epa.gov]; Wirth, Karen [Wirth.Karen@epa.gov]; Watson, Jane [watson.jane@epa.gov]; Dwyer, Stacey [Dwyer.Stacey@epa.gov]; Ruiz, Thomas [Ruiz.Thomas@epa.gov]; Cooper, WilliamF [Cooper.WilliamF@epa.gov]; Kaspar, Paul [kaspar.paul@epa.gov]; Hamilton, Denise [Hamilton.Denise@epa.gov]; Nystrom, Eric [nystrom.eric@epa.gov]; Khan, Sidrah [khan.sidrah@epa.gov]; Jones, Kristin [jones.kristin@epa.gov]; Foreman, Katherine [Foreman.Katherine@epa.gov]; Nitsch, Chad [Nitsch.Chad@epa.gov]; Drake, Kerry [Drake.Kerry@epa.gov]; TenBrook, Patti [TenBrook.Patti@epa.gov]; Dominy, Randy [Dominy.Randy@epa.gov]; FertikEdgerton, Rachel [FertikEdgerton.Rachel@epa.gov]; Lane, Willie [Lane.Willie@epa.gov]; Honker, William [honker.william@epa.gov]; Lawrence, Rob [Lawrence.Rob@epa.gov]; Argyropoulos, Paul [Argyropoulos.Paul@epa.gov]; Molloy, Jennifer [molloy.jennifer@epa.gov]; Chu, Karen [Chu.Karen@epa.gov]; Williams, Bo (James) [Williams.James@epa.gov]; Schaeffer, Blake [Schaeffer.Blake@epa.gov]; Greene, Rick [Greene.Rick@epa.gov]; Chan, Janice [Chan.Janice@epa.gov]; Morant, Mervalin - NIFA [MMorant@nifa.usda.gov]; Berg, ElizabethG [Berg.ElizabethG@epa.gov]; Culver, Edison [culver.edison@epa.gov]; Hubbard, Joseph [Hubbard.Joseph@epa.gov]; Crocker, Philip [crocker.philip@epa.gov]; Garcia, David [Garcia.David@epa.gov]; Abshire, Andrea [Abshire.Andrea@epa.gov]; Bailley, Treasure [Bailley.Treasure@epa.gov]; Basile, Alfred [Basile.Alfred@epa.gov]; Hutchinson, Marcella [Hutchinson.Marcella@epa.gov]; Ismert, Peter [Ismert.Peter@epa.gov]; Kleeman, Gary [Kleeman.Gary@epa.gov]; Monahan, Peter [Monahan.Peter@epa.gov]; Pfeiffer, Tricia [Pfeiffer.Tricia@epa.gov]; Steinhaus, Eric [Steinhaus.Eric@epa.gov]; Truskowski, Brent [truskowski.brent@epa.gov]; Canino, Richard [Canino.Richard@epa.gov]; Delapuente, Alejandro [adelapue@nsf.gov]; Wooster, Richard [Wooster.Richard@epa.gov]; Kensinger, Justin [kensinger.justin@epa.gov]; Ortiz, Eduardo [Ortiz.Eduardo@epa.gov]; Restivo, Angela [Restivo.Angela@epa.gov]; Reinhart, Jill - NRCS, Indianapolis, IN [jill.reinhart@in.usda.gov]; Wooster-Brown, Catherine [Wooster-Brown.Catherine@epa.gov]; Jones, Margaret [jones.margaret@epa.gov]; McDonald, Holly [mcdonald.holly@epa.gov]; Rivera-Lupianez, Ana [Rivera-Lupianez.Ana@epa.gov]; Gill, Sonam [Gill.Sonam@epa.gov]; Rea, Anne [Rea.Anne@epa.gov]; Hayes, Mark [hayes.mark@epa.gov]; Quinn, Wilonda [quinn.wilonda@epa.gov]; Thompson, Craig [Thompson.Craig@epa.gov]; Cashdollar, Jennifer [Cashdollar.Jennifer@epa.gov]; Johnston, JohnM [Johnston.JohnM@epa.gov]; Muche, Muluken [Muche.Muluken@epa.gov]; Sharpe, Kristinn [Sharpe.Kristinn@epa.gov]; Corona, Elizabeth

[Corona.Elizabeth@epa.gov]; Tapia, Cecilia [Tapia.Cecilia@epa.gov]; Cassel, Cynthia [Cassel.Cynthia@epa.gov]; DeLong, Tiffany [delong.tiffany@epa.gov]; Chandler, Joe [Joe.Chandler@fema.dhs.gov]; Tilley, Amber [Tilley.Amber@epa.gov]; Wolfe, Michelle [Michelle.Wolfe@fema.dhs.gov]; Tapp, Joshua [Tapp.Joshua@epa.gov]; Mehl, Hollis [Mehl.Hollis@epa.gov]; Blank, Valerie [Blank.Valerie@epa.gov]

Subject: RE: Agenda Attached: Monthly Ag Issues Forum Call - Recurring Scheduler

Hi all,

I wanted to give you some information on the CERCLA and EPCRA reporting of air emissions from farms prior to our discussion this afternoon. Below is our press release and link to our guidance to farms which went out last Wednesday.

Reporting Exemption for Animal Waste and Resulting Litigation
On December 18, 2008, EPA published a final rule that exempted most farms from certain release reporting requirements in CERCLA and EPCRA. Specifically, the rule exempted farms releasing hazardous substances from animal waste to the air above threshold levels from reporting under CERCLA. For EPCRA reporting, the rule exempted reporting of such releases if the farm had fewer animals than a large concentrated animal feeding operation (CAFO).

In short, all farms were relieved from reporting hazardous substance air releases from animal waste under CERCLA, and only large CAFOs were subject to EPCRA reporting.

A number of citizen groups challenged the validity of the final rule in the U.S. Court of Appeals for the District of Columbia Circuit. On April 11, 2017, the Court struck down the final rule, eliminating the reporting exemptions for farms. EPA sought additional time from the Court to delay the effective date so that EPA could develop guidance materials to help farmers understand their reporting obligations. Unless the DC Circuit Court takes further action, the court's ruling takes effect on November 15, 2017.

EPA has developed guidance to assist farms in estimating and, if required, reporting their releases. The guidance can be found at: cercla-and-epcra-reporting-requirements-air-releases-hazardous-substances-animal-waste-farms.

Thanks,
Kim

Kim Jennings
Division Director || Regulations Implementation Division
U.S. Environmental Protection Agency || Office of Emergency Management
E-mail: jennings.kim@epa.gov || **Desk:** (202) 564-7998 ||

-----Original Appointment-----
From: Mortensen, Ginah
Sent: Friday, October 27, 2017 4:34 PM
To: Mortensen, Ginah; Adkins, Tabatha; Ager, Sara; Allnutt, David; amend, carol; Arvizu, Christy; Back, Tracy; Bartenfelder, David; Baumgartner, Donald; Bishop, Debbie; Bloom, Judy; Boos, Gerard; Bravo, Antonio; Breedlove, Dan; Brown, Dan; Burchard, Robert; Burns, Ward; Butler, John; Cabrera-Stagno, Valentina; Carter-Jenkins, Shakeba; Coats, Andrea; Collins, Jerry; Costa, Allison; Daniels, Jason; DeHaven, Leigh; Downing, Jane; Drake, Wendy; Dunkins, Robin; Dunlevy, Robert; Dygowski, Laurel; Fenton, Kathleen; Fergusson, Bruce; Figueroa, Zaida; Fisher, Jacqueline; Fitz, Nancy; Flahive, Katie; Frizzell, Damon; Galloway, Carol; Gargas, Toni; Gilbert, Neal; Gould, Stephen; Gratz, Jeff; Greenwald, Kathryn; greg.johnson@por.usda.gov; Grier, Gina; Grisier, Mary; Gunter, Jason; Halstead, Amanda; Hamera, Donald; Hart, Debbi; Heinemann, Kristina; Horak, David; Horchem, Brad; Howard, MarkW; Howland, Sanda; Hubert, Gayle; Hyde, Tinka; Jackson, Robert W.; Jacobs, Kira; Johnson, James; Kasai, Jeanne; Schefski, Melissa; Keaney, Kevin; Koethe, Robert; Krudner, Maureen; Kupchan, Simma; Lamb, Brad; Lancaster, Kris; Larsen, Erika; Lehman, Stuart; Lemieux, Paul; LEVIN,

NANCY; Longo, Linda; Lubbe, Wendy; MacIntyre, Mark; Mahoney, Michele; Matthews, Mark; McCullough, Hugh; Mitschele, Becky; Moore, Audrey; Moses, Althea; Nuhfer, Mark; Olszyk, David; Ostigaard, Crystal; Peak, Nicholas; Perreault, Peg; Perrin, Rebecca; Peterson, Samuel; Phillips, Todd; Pierce, Troy; Pinkerton, Kate; Plymale, Chris; Pollard, Stephen; Pont, Richard; Porter, Donna; Rao, Kate; Ridley, Caroline; Rise, David; Roberto, Joseph; Roberts, Rickey; Sampath, Sam; Sarokin, David; Schademann, Randy; Schafer, Jeannette; Schrock, Bill; Shenk, Kelly; Shields, Amy; Socha, Julianne; Spaulding, William; Sperry, Clint; Stevenson, Michelle; Stevenson, Suzanne; Stoy, Alyse; Suffian, Fred; Sullivan, Tim; Swackhammer, J-Troy; Szylvian, Andrea M.; Tankersley, Julie; Terada, Derrick; Thilsted, Eugene; Thomas, Derval; Thomas, Paul; Urban, Trevor; Utting, George; VanTil, Barbara; Weiler, Gregory; Weinberg, Anne; Werntz, James; Wilkinson, Bruce; Winiecki, Eric; Winn, G. Dean; Winnett, Steven; Yaras, Michelle; Young, Carl; Ziegler, Sam; Zimmer, Andrea; Zimmerman, Dea; Bonnelycke, Nina; Whitehurst, Shanika; Subramanian, Hema; Arling, Michelle; Green, Holly; Edmondson, Lucy; Robertson, Duane; Woodward, Cheryl; Jones-Johnson, Shea; Palomares, Art; Lynch, Katie; ted.strauss@ca.usda.gov; johnnie.siliznoff@ca.usda.gov; O'Donnell, Thomas K.; Gioffre, Patricia; Roberts, Connie; Aaron, Mark; McGown, Michael; Comerford, Sherri; Carbone, Chad; Taylor, Timothy; Summerlin, Joe; Spence, Kelley; Billups, Angie; Melanson, Kate; Perkins, Stephen; Taylor, TeAndra; Quigley, Heather; Murdie, Ashley; Park, Jennifer; Calvo, Estrella; Rush, Randall; Giddings, Daniel; OBrien, Wendy; Farris, Laura; Ferris, Lena; Williams, Joe; Flournoy, Karen; LUEHE, DOUGLAS; Holst, Linda; Damico, Brian; gfritz@usgs.gov; jcoles@usgs.gov; mdraper@nifa.usda.gov; sjkalkho@usgs.gov; Carlson, Christopher -FS; Greg Zwicke; jwfrey@usgs.gov; karma.anderson@por.usda.gov; Anderson-Carnahan, Linda; Carlson, Rachel; Lawrence, Patty - NRCS, Washington, DC; Freeman, Tamara; Aspy, Dale; Bassett, Jay; Bingham, Kimberly; Cheeks, Thornell; Davis, Molly; Davis, Scott; Fifadara, Dipesh; Gillam, Rick; Huey, Joel; Johnston, Jon; Laycock, Kelly; Newbold, Amy; Powell, Alan; Strange, Joel; Thomas, Chris; Webster, James; Wylie, Mike; Echeverria, Marietta; Goodis, Michael; Ziobro, Joseph; Melnick, Rachel - NIFA; Helder, Dirk; Murphy, Jim; Sands, Jeffrey; Jennings, Kim; Jacob, Sicy; Sanzone, Stephanie
Cc: Ellington, Natalie; Wirth, Karen; Watson, Jane; Dwyer, Stacey; Ruiz, Thomas; Cooper, WilliamF; Kaspar, Paul; Hamilton, Denise; Nystrom, Eric; Khan, Sidrah; Jones, Kristin; Foreman, Katherine; Nitsch, Chad; Drake, Kerry; TenBrook, Patti; Dominy, Randy; FertikEdgerton, Rachel; Lane, Willie; Honker, William; Lawrence, Rob; Argyropoulos, Paul; Molloy, Jennifer; Chu, Karen; Williams, Bo (James); Schaeffer, Blake; Greene, Rick; Chan, Janice; Morant, Mervalin - NIFA; Berg, ElizabethG; Culver, Edison; Hubbard, Joseph; Crocker, Philip; Garcia, David; Abshire, Andrea; Bailley, Treasure; Basile, Alfred; Hutchinson, Marcella; Ismert, Peter; Kleeman, Gary; Monahan, Peter; Pfeiffer, Tricia; Steinhaus, Eric; Truskowski, Brent; Canino, Richard; Delapuente, Alejandro; Wooster, Richard; Kensinger, Justin; Ortiz, Eduardo; Restivo, Angela; Reinhart, Jill - NRCS, Indianapolis, IN; Wooster-Brown, Catherine; Jones, Margaret; McDonald, Holly; Rivera-Lupianez, Ana; Gill, Sonam; Rea, Anne; Hayes, Mark; Quinn, Wilonda; Thompson, Craig; Cashdollar, Jennifer; Johnston, JohnM; Muche, Muluken; Sharpe, Kristinn; Corona, Elizabeth; Tapia, Cecilia; Cassel, Cynthia; DeLong, Tiffany; Chandler, Joe; Tilley, Amber; Wolfe, Michelle; Tapp, Joshua; Mehl, Hollis; Blank, Valerie
Subject: Agenda Attached: Monthly Ag Issues Forum Call - Recurring Scheduler
When: Thursday, November 02, 2017 1:30 PM-3:00 PM (UTC-06:00) Central Time (US & Canada).
Where: Ex. 6 Conference line: Ex. 6 code: Ex. 6

Update 10/27/2017

Hello Everyone,

Attached is the agenda for the Thursday, November 2 call. There may be slides coming next week.

I am out of the office next week so Carol Galloway will be leading the call.

In addition to the ORD topic regarding recent and ongoing research on Kansas fishes -- They are looking for information from our group on any data that is available that might assist them in their research – agenda topics include:
-- An update from Jeff Sands, the new Advisor to the Administrator for Ag Policy
-- CERCLA and EPCRA reporting of air emissions from farms
-- new Air BMP document

If you have any questions, please contact Carol.

Thanks!
Ginah

<< File: Ag Issues Forum Agenda - October-November 2017.docx >>

Update

Hello Everyone,

There are conflicts with the October 26 call, so I am moving the call to Thursday, November 2, from 2:30 – 4pm ET.

For the November 2 call we will use an Adobe connect:
Adobe connect url (click on the conference link and enter with your First and Last name as a guest):
Ex. 6

Conference line: Ex. 6, then enter the conference code: Ex. 6

Please Note: Audio from the conference line will be broadcast both by telephone and by computer via Adobe Connect. If you plan to participate by phone, please mute your computer speakers prior to the seminar to avoid feedback.

The agenda and some slides for a presentation by ORD will be sent as we get closer to the date for the call.

One of the topics for the call: ORD will discuss recent and ongoing research on Kansas fishes. They are looking for information from our group on any data that is available that might assist them in their research.
This research uses the Water Quality Portal (WQP) to access data. This data was collected by multiple agencies. USGS data comes from the NWIS database and EPA data comes from the STORET database. However, water quality, stream habitat, and fish community data are limited. Any water quality data including dissolved solids, conductivity, dissolved oxygen, and pesticide (atrazine,2,4-D, bifenthrin, etc.) and stream habitat (substrate type) information will improve the research extent and quality. Any stream water quality data will be appreciated.

Please forward this scheduler to others from your program who might be interested in this topic or have information on potential data sources.

Thanks!
Ginah

Hello Everyone,

This is a new recurring scheduler for the monthly Ag Issues Forum conference calls. Please accept this invitation in order to have these calls added to your calendar; you can then decline individual calls as necessary.

Call-in number Ex. 6; Ex. 6

Suggestions for agenda topics are always welcome!

Background about the Ag Issues Forum calls:
EPA's National Ag Center sponsors monthly calls focusing on ag issues the fourth Thursday of every month from 2:30 – 4pm ET. Participants in the calls include EPA HQ and Regional staff interested in ag issues and reps from USDA and USGS.

Thanks!

Ginah
913-551-5028

EPA's Ag Center
http://www.epa.gov/agriculture

Message

From: Shimmin, Kaitlyn [shimmin.kaitlyn@epa.gov]
Sent: 1/22/2018 5:14:49 PM
To: Beck, Nancy [Beck.Nancy@epa.gov]; Sands, Jeffrey [sands.jeffrey@epa.gov]
CC: Lyons, Troy [lyons.troy@epa.gov]; Palich, Christian [palich.christian@epa.gov]
Subject: OCSPP EPW Hearing Prep
Attachments: OCSPP-1 Deliberative Process / Ex. 5 .docx; OCSPP-2 Deliberative Process / Ex. 5 .docx; OCSPP-3 Deliberative Process / Ex. 5 .docx; OCSPP-4 Deliberative Process / Ex. 5 .docx; OCSPP-5 Deliberative Process / Ex. 5 Deliberative Process / Ex. 5 .docx; OCSPP-6 Deliberative Process / Ex. 5 .docx; OCSPP-7 Deliberative Process / Ex. 5 .docx; OCSPP-8 Deliberative Process / Ex. 5 DOCX; OCSPP-9 Deliberative Process / Ex. 5 .docx; 1.31 Hearing Briefing Schedule .docx

Hi Nancy and Jeff,

You should be getting a invite via Hayley for the Chemicals/ Pesticides Briefing with the Administrator scheduled for Jan 24th 4:00 – 4:30 PM. Please see the attached fact sheets that are in ESP's briefing binder.

We have identified the following topics to discuss. Please let us know if you think we missed anything. Thanks!

OSCPP Briefing
Nancy Beck & Jeff Sands

Topics

Ex. 5 Deliberative Process (DP)

Kaitlyn Shimmin
Special Assistant Congressional and Intergovernmental Affairs
Office of the Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460
O: (202) 564-4108
C: Ex. 6
Shimmin.Kaitlyn@epa.gov

Message

From: Gunasekara, Mandy [Gunasekara.Mandy@epa.gov]
Sent: 11/1/2017 1:03:32 PM
To: Sands, Jeffrey [sands.jeffrey@epa.gov]
Subject: RVOs
Attachments: EO12866_RFS 2018 Annual Rule 2060-AT04 FRM FRN_20171030.docx

Hey Jeff,
I'm realizing now I never sent you the Final RVOs. Apologies. See attached. We sent them to OMB on yesterday and are going through a 30-day interagency review process.
Also, we have a mutual friend – Nick Pearson!
Best,
Mandy

Mandy M. Gunasekara
Principal Deputy Assistant Administrator
Office of Air and Radiation
US Environmental Protection Agency

Message

From: Galloway, Carol [Galloway.Carol@epa.gov]
Sent: 10/31/2017 3:20:23 PM
To: Mortensen, Ginah [mortensen.ginah@epa.gov]; Adkins, Tabatha [Adkins.Tabatha@epa.gov]; Ager, Sara [Ager.Sara@epa.gov]; Allnutt, David [Allnutt.David@epa.gov]; amend, carol [amend.carol@epa.gov]; Arvizu, Christy [Arvizu.Christy@epa.gov]; Back, Tracy [back.tracy@epa.gov]; Bartenfelder, David [Bartenfelder.David@epa.gov]; Baumgartner, Donald [baumgartner.donald@epa.gov]; Bishop, Debbie [Bishop.Debbie@epa.gov]; Bloom, Judy [Bloom.Judy@epa.gov]; Boos, Gerard [Boos.Gerard@epa.gov]; Bravo, Antonio [Bravo.Antonio@epa.gov]; Breedlove, Dan [Breedlove.Dan@epa.gov]; Brown, Dan [Brown.Dan@epa.gov]; Burchard, Robert [Burchard.Robert@epa.gov]; Burns, Ward [Burns.Ward@epa.gov]; Butler, John [Butler.JohnJ@epa.gov]; Cabrera-Stagno, Valentina [Cabrera-Stagno.Valentina@epa.gov]; Carter-Jenkins, Shakeba [Carter-Jenkins.Shakeba@epa.gov]; Coats, Andrea [Coats.Andrea@epa.gov]; Collins, Jerry [collins.jerry@epa.gov]; Costa, Allison [Costa.Allison@epa.gov]; Daniels, Jason [Daniels.Jason@epa.gov]; DeHaven, Leigh [DeHaven.Leigh@epa.gov]; Downing, Jane [Downing.Jane@epa.gov]; Drake, Wendy [drake.wendy@epa.gov]; Dunkins, Robin [Dunkins.Robin@epa.gov]; Dunlevy, Robert [Dunlevy.Robert@epa.gov]; Dygowski, Laurel [Dygowski.Laurel@epa.gov]; Fenton, Kathleen [Fenton.Kathleen@epa.gov]; Fergusson, Bruce [Fergusson.Bruce@epa.gov]; Figueroa, Zaida [Figueroa.Zaida@epa.gov]; Fisher, Jacqueline [Fisher.Jacqueline@epa.gov]; Fitz, Nancy [Fitz.Nancy@epa.gov]; Flahive, Katie [Flahive.Katie@epa.gov]; Frizzell, Damon [Frizzell.Damon@epa.gov]; Gargas, Toni [Gargas.Toni@epa.gov]; Gilbert, Neal [Gilbert.Neal@epa.gov]; Gould, Stephen [Gould.Stephen@epa.gov]; Gratz, Jeff [Gratz.Jeff@epa.gov]; Greenwald, Kathryn [Greenwald.Kathryn@epa.gov]; greg.johnson@por.usda.gov; Grier, Gina [Grier.Gina@epa.gov]; Grisier, Mary [Grisier.Mary@epa.gov]; Gunter, Jason [gunter.jason@epa.gov]; Halstead, Amanda [halstead.amanda@epa.gov]; Hamera, Donald [Hamera.Don@epa.gov]; Hart, Debbi [Hart.Debbi@epa.gov]; Heinemann, Kristina [Heinemann.Kristina@epa.gov]; Horak, David [horak.david@epa.gov]; Horchem, Brad [horchem.brad@epa.gov]; Howard, MarkW [Howard.MarkW@epa.gov]; Howland, Sanda [Howland.Sanda@epa.gov]; Hubert, Gayle [Hubert.Gayle@epa.gov]; Hyde, Tinka [hyde.tinka@epa.gov]; Jackson, Robert W. [Jackson.Robertw@epa.gov]; Jacobs, Kira [Jacobs.Kira@epa.gov]; Johnson, James [Johnson.James@epa.gov]; Kasai, Jeanne [Kasai.Jeanne@epa.gov]; Schefski, Melissa [Schefski.Melissa@epa.gov]; Keaney, Kevin [Keaney.Kevin@epa.gov]; Koethe, Robert [Koethe.Robert@epa.gov]; Krudner, Maureen [Krudner.Maureen@epa.gov]; Kupchan, Simma [Kupchan.Simma@epa.gov]; Lamb, Brad [Lamb.Brad@epa.gov]; Lancaster, Kris [Lancaster.Kris@epa.gov]; Larsen, Erika [Larsen.Erika@epa.gov]; Lehman, Stuart [Lehman.Stuart@epa.gov]; Lemieux, Paul [Lemieux.Paul@epa.gov]; LEVIN, NANCY [Levin.Nancy@epa.gov]; Longo, Linda [Longo.Linda@epa.gov]; Lubbe, Wendy [Lubbe.Wendy@epa.gov]; MacIntyre, Mark [Macintyre.Mark@epa.gov]; Mahoney, Michele [Mahoney.Michele@epa.gov]; Matthews, Mark [Matthews.Mark@epa.gov]; McCullough, Hugh [McCullough.Hugh@epa.gov]; Mitschele, Becky [Mitschele.Becky@epa.gov]; Moore, Audrey [Moore.Audrey@epa.gov]; Moses, Althea [Moses.Althea@epa.gov]; Nuhfer, Mark [Nuhfer.Mark@epa.gov]; Olszyk, David [Olszyk.David@epa.gov]; Ostigaard, Crystal [Ostigaard.Crystal@epa.gov]; Peak, Nicholas [Peak.Nicholas@epa.gov]; Perreault, Peg [Perreault.Peg@epa.gov]; Perrin, Rebecca [Perrin.Rebecca@epa.gov]; Peterson, Samuel [Peterson.Samuel@epa.gov]; Phillips, Todd [Phillips.Todd@epa.gov]; Pierce, Troy [Pierce.Troy@epa.gov]; Pinkerton, Kate [Pinkerton.Kate@epa.gov]; Plymale, Chris [Plymale.Christopher@epa.gov]; Pollard, Stephen [Pollard.Stephen@epa.gov]; Pont, Richard [Pont.Richard@epa.gov]; Porter, Donna [Porter.Donna@epa.gov]; Rao, Kate [Rao.kate@epa.gov]; Ridley, Caroline [Ridley.Caroline@epa.gov]; Rise, David [rise.david@epa.gov]; Roberto, Joseph [Roberto.Joseph@epa.gov]; Roberts, Rickey [Roberts.Rickey@epa.gov]; Sampath, Sam [Sampath.Sam@epa.gov]; Sarokin, David [Sarokin.David@epa.gov]; Schademann, Randy [Schademann.Randy@epa.gov]; Schafer, Jeannette [schafer.jeannette@epa.gov]; Schrock, Bill [Schrock.Bill@epa.gov]; Shenk, Kelly [shenk.kelly@epa.gov]; Shields, Amy [Shields.Amy@epa.gov]; Socha, Julianne [socha.julianne@epa.gov]; Spaulding, William [spaulding.william@epa.gov]; Sperry, Clint [Sperry.Clint@epa.gov]; Stevenson, Michelle [Stevenson.Michelle@epa.gov]; Stevenson, Suzanne [Stevenson.Suzanne@epa.gov]; Stoy, Alyse [Stoy.Alyse@epa.gov]; Suffian, Fred [Suffian.Fred@epa.gov]; Sullivan, Tim [Sullivan.Tim@epa.gov]; Swackhammer, J-Troy [Swackhammer.J-Troy@epa.gov]; Szylvian, Andrea M. [Szylvian.Andrea@epa.gov]; Tankersley, Julie [Tankersley.Julie@epa.gov]; Terada, Derrick [Terada.Derrick@epa.gov]; Thilsted, Eugene [Thilsted.Eugene@epa.gov]; Thomas, Derval [Thomas.Derval@epa.gov]; Thomas, Paul [thomas.paul@epa.gov]; Urban, Trevor [Urban.Trevor@epa.gov]; Utting, George [Utting.George@epa.gov]; VanTil, Barbara [vantil.barbara@epa.gov]; Weiler, Gregory [weiler.gregory@epa.gov]; Weinberg, Anne [Weinberg.Anne@epa.gov]; Werntz, James [Werntz.James@epa.gov]; Wilkinson, Bruce [wilkinson.bruce@epa.gov]; Winiecki, Eric [Winiecki.Eric@epa.gov]; Winn, G. Dean [winn.gerald@epa.gov]; Winnett, Steven [winnett.steven@epa.gov]; Yaras, Michelle [Yaras.Michelle@epa.gov]; Young, Carl [young.carl@epa.gov]; Ziegler, Sam [Ziegler.Sam@epa.gov]; Zimmer, Andrea [Zimmer.Andrea@epa.gov]; Zimmerman, Dea [Zimmerman.Dea@epa.gov]; Bonnelycke, Nina

[Bonnelycke.Nina@epa.gov]; Whitehurst, Shanika [whitehurst.shanika@epa.gov]; Subramanian, Hema [Subramanian.Hema@epa.gov]; Arling, Michelle [Arling.Michelle@epa.gov]; Green, Holly [Green.Holly@epa.gov]; Edmondson, Lucy [Edmondson.Lucy@epa.gov]; Robertson, Duane [Robertson.Duane@epa.gov]; Woodward, Cheryl [Woodward.Cheryl@epa.gov]; Jones-Johnson, Shea [Jones-Johnson.Shea@epa.gov]; Palomares, Art [Palomares.Art@epa.gov]; Lynch, Katie [Lynch.Katie@epa.gov]; ted.strauss@ca.usda.gov; johnnie.siliznoff@ca.usda.gov; O'Donnell, Thomas K. [ODonnell.Thomas@epa.gov]; Gioffre, Patricia [Gioffre.Patricia@epa.gov]; Roberts, Connie [Roberts.Connie@epa.gov]; Aaron, Mark [aaron.mark@epa.gov]; McGown, Michael [McGown.Michael@epa.gov]; Comerford, Sherri [Comerford.Sherri@epa.gov]; Carbone, Chad [Carbone.Chad@epa.gov]; Taylor, Timothy [Taylor.Timothy@epa.gov]; Summerlin, Joe [summerlin.joe@epa.gov]; Spence, Kelley [Spence.Kelley@epa.gov]; Billups, Angie [Billups.Angie@epa.gov]; Melanson, Kate [Melanson.Kate@epa.gov]; Perkins, Stephen [Perkins.Stephen@epa.gov]; Taylor, TeAndra [Taylor.TeAndra@epa.gov]; Quigley, Heather [Quigley.Heather@epa.gov]; Murdie, Ashley [murdie.ashley@epa.gov]; Park, Jennifer [park.jennifer@epa.gov]; Calvo, Estrella [calvo.estrella@epa.gov]; Rush, Randall [Rush.Randall@epa.gov]; Giddings, Daniel [giddings.daniel@epa.gov]; OBrien, Wendy [OBrien.Wendy@epa.gov]; Farris, Laura [Farris.Laura@epa.gov]; Ferris, Lena [Ferris.Lena@epa.gov]; Williams, Joe [Williams.Joe@epa.gov]; Flournoy, Karen [Flournoy.Karen@epa.gov]; LUEHE, DOUGLAS [luehe.douglas@epa.gov]; Holst, Linda [holst.linda@epa.gov]; Damico, Brian [Damico.Brian@epa.gov]; gfritz@usgs.gov; jcoles@usgs.gov; mdraper@nifa.usda.gov; sjkalkho@usgs.gov; Carlson, Christopher -FS [ccarlson@fs.fed.us]; Greg Zwicke [greg.zwicke@ftc.usda.gov]; jwfrey@usgs.gov; karma.anderson@por.usda.gov; Anderson-Carnahan, Linda [Anderson-Carnahan.Linda@epa.gov]; Carlson, Rachel [Carlson.Rachel@epa.gov]; Lawrence, Patty - NRCS, Washington, DC [Patty.Lawrence@wdc.usda.gov]; Freeman, Tamara [Freeman.Tamara@epa.gov]; Aspy, Dale [Aspy.Dale@epa.gov]; Bassett, Jay [Bassett.Jay@epa.gov]; Bingham, Kimberly [Bingham.Kimberly@epa.gov]; Cheeks, Thornell [Cheeks.Thornell@epa.gov]; Davis, Molly [Davis.Molly@epa.gov]; Davis, Scott [Davis.ScottR@epa.gov]; Fifadara, Dipesh [Fifadara.Dipesh@epa.gov]; Gillam, Rick [Gillam.Rick@epa.gov]; Huey, Joel [Huey.Joel@epa.gov]; Johnston, Jon [Johnston.Jon@epa.gov]; Laycock, Kelly [Laycock.Kelly@epa.gov]; Newbold, Amy [Newbold.Amy@epa.gov]; Powell, Alan [Powell.Alan@epa.gov]; Strange, Joel [Strange.Joel@epa.gov]; Thomas, Chris [Thomas.Chris@epa.gov]; Webster, James [Webster.James@epa.gov]; Wylie, Mike [Wylie.Mike@epa.gov]; Echeverria, Marietta [Echeverria.Marietta@epa.gov]; Goodis, Michael [Goodis.Michael@epa.gov]; Ziobro, Joseph [Ziobro.Joseph@epa.gov]; Melnick, Rachel - NIFA [RMelnick@nifa.usda.gov]; Helder, Dirk [Helder.Dirk@epa.gov]; Murphy, Jim [Murphy.Jim@epa.gov]; Sands, Jeffrey [sands.jeffrey@epa.gov]; Jennings, Kim [Jennings.Kim@epa.gov]; Jacob, Sicy [Jacob.Sicy@epa.gov]

CC: Ellington, Natalie [Ellington.Natalie@epa.gov]; Wirth, Karen [Wirth.Karen@epa.gov]; Watson, Jane [watson.jane@epa.gov]; Dwyer, Stacey [Dwyer.Stacey@epa.gov]; Ruiz, Thomas [Ruiz.Thomas@epa.gov]; Cooper, WilliamF [Cooper.WilliamF@epa.gov]; Kaspar, Paul [kaspar.paul@epa.gov]; Hamilton, Denise [Hamilton.Denise@epa.gov]; Nystrom, Eric [nystrom.eric@epa.gov]; Khan, Sidrah [khan.sidrah@epa.gov]; Jones, Kristin [jones.kristin@epa.gov]; Foreman, Katherine [Foreman.Katherine@epa.gov]; Nitsch, Chad [Nitsch.Chad@epa.gov]; Drake, Kerry [Drake.Kerry@epa.gov]; TenBrook, Patti [TenBrook.Patti@epa.gov]; Dominy, Randy [Dominy.Randy@epa.gov]; FertikEdgerton, Rachel [FertikEdgerton.Rachel@epa.gov]; Lane, Willie [Lane.Willie@epa.gov]; Honker, William [honker.william@epa.gov]; Lawrence, Rob [Lawrence.Rob@epa.gov]; Argyropoulos, Paul [Argyropoulos.Paul@epa.gov]; Molloy, Jennifer [molloy.jennifer@epa.gov]; Chu, Karen [Chu.Karen@epa.gov]; Williams, Bo (James) [Williams.James@epa.gov]; Schaeffer, Blake [Schaeffer.Blake@epa.gov]; Greene, Rick [Greene.Rick@epa.gov]; Chan, Janice [Chan.Janice@epa.gov]; Morant, Mervalin - NIFA [MMorant@nifa.usda.gov]; Berg, ElizabethG [Berg.ElizabethG@epa.gov]; Culver, Edison [culver.edison@epa.gov]; Hubbard, Joseph [Hubbard.Joseph@epa.gov]; Crocker, Philip [crocker.philip@epa.gov]; Garcia, David [Garcia.David@epa.gov]; Abshire, Andrea [Abshire.Andrea@epa.gov]; Bailley, Treasure [Bailley.Treasure@epa.gov]; Basile, Alfred [Basile.Alfred@epa.gov]; Hutchinson, Marcella [Hutchinson.Marcella@epa.gov]; Ismert, Peter [Ismert.Peter@epa.gov]; Kleeman, Gary [Kleeman.Gary@epa.gov]; Monahan, Peter [Monahan.Peter@epa.gov]; Pfeiffer, Tricia [Pfeiffer.Tricia@epa.gov]; Steinhaus, Eric [Steinhaus.Eric@epa.gov]; Truskowski, Brent [truskowski.brent@epa.gov]; Canino, Richard [Canino.Richard@epa.gov]; Delapuente, Alejandro [adelapue@nsf.gov]; Wooster, Richard [Wooster.Richard@epa.gov]; Kensinger, Justin [kensinger.justin@epa.gov]; Ortiz, Eduardo [Ortiz.Eduardo@epa.gov]; Restivo, Angela [Restivo.Angela@epa.gov]; Reinhart, Jill - NRCS, Indianapolis, IN [jill.reinhart@in.usda.gov]; Wooster-Brown, Catherine [Wooster-Brown.Catherine@epa.gov]; Jones, Margaret [jones.margaret@epa.gov]; McDonald, Holly [mcdonald.holly@epa.gov]; Rivera-Lupianez, Ana [Rivera-Lupianez.Ana@epa.gov]; Gill, Sonam [Gill.Sonam@epa.gov]; Rea, Anne [Rea.Anne@epa.gov]; Hayes, Mark [hayes.mark@epa.gov]; Quinn, Wilonda [quinn.wilonda@epa.gov]; Thompson, Craig [Thompson.Craig@epa.gov]; Cashdollar, Jennifer [Cashdollar.Jennifer@epa.gov]; Johnston, JohnM [Johnston.JohnM@epa.gov]; Muche, Muluken [Muche.Muluken@epa.gov]; Sharpe, Kristinn [Sharpe.Kristinn@epa.gov]; Corona, Elizabeth [Corona.Elizabeth@epa.gov]; Tapia, Cecilia [Tapia.Cecilia@epa.gov]; Cassel, Cynthia [Cassel.Cynthia@epa.gov];

DeLong, Tiffany [delong.tiffany@epa.gov]; Chandler, Joe [Joe.Chandler@fema.dhs.gov]; Tilley, Amber [Tilley.Amber@epa.gov]; Wolfe, Michelle [Michelle.Wolfe@fema.dhs.gov]; Tapp, Joshua [Tapp.Joshua@epa.gov]; Mehl, Hollis [Mehl.Hollis@epa.gov]; Blank, Valerie [Blank.Valerie@epa.gov]

Subject: Briefing Material Added: Monthly Ag Issues Forum Call

Attachments: Agenda Attached: Monthly Ag Issues Forum Call - Recurring Scheduler ; Muche et al_2017_Endangered_Fish_Species_Kansas.pdf

Reminder: New call in number and link for this call only!

Ex. 6

Conference line: Ex. 6 , code: Ex. 6

Endangered Fish Species in Kansas: Historical vs Contemporary Distribution

Muluken Muche[1], Sumathy Sinnathamby[2], John M Johnston[1], Mike Cyterski[1]

[1] Office of Research and Development, U.S. Environmental Protection Agency (ORD/ EPA), Athens, GA
[2] Oak Ridge Institute for Science and Education (ORISE) Postdoctoral Research Participant at ORD/EPA, Athens, GA

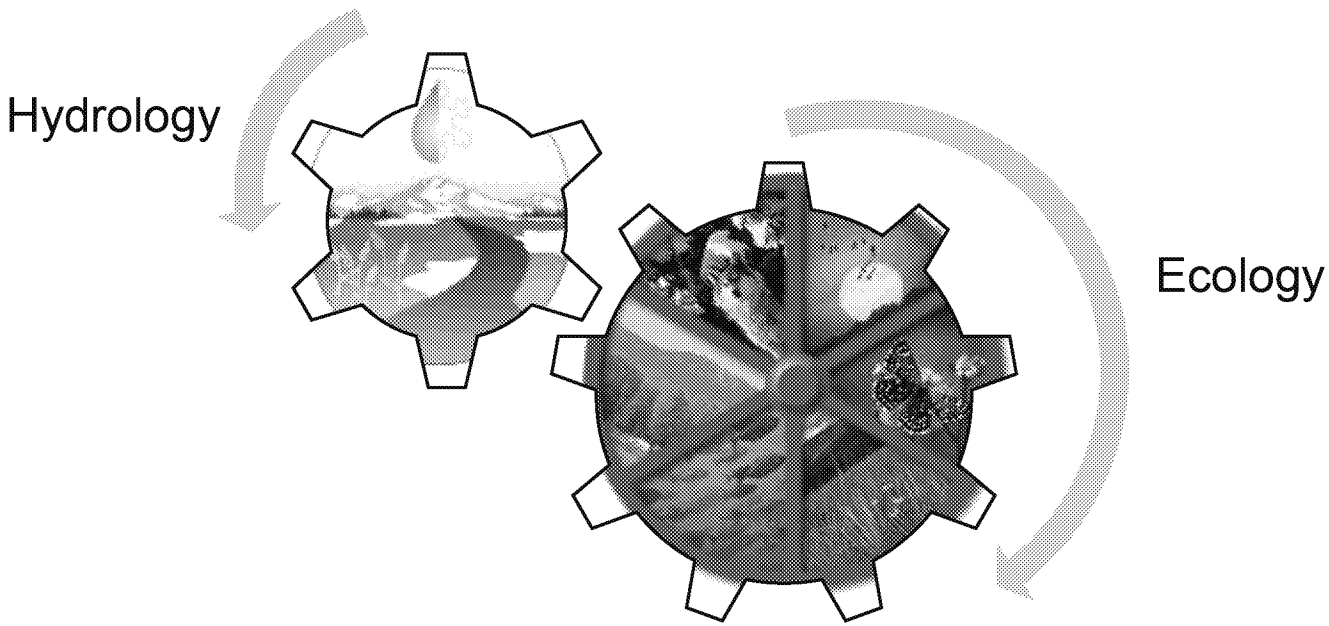
muche.muluken@epa.gov

Outline

- Ecohydrology: introduction and needs
- Previous work: linking hydrological trends and fish presence and distribution
- Objective and methods
- Preliminary results and conclusion

What is Ecohydrology?

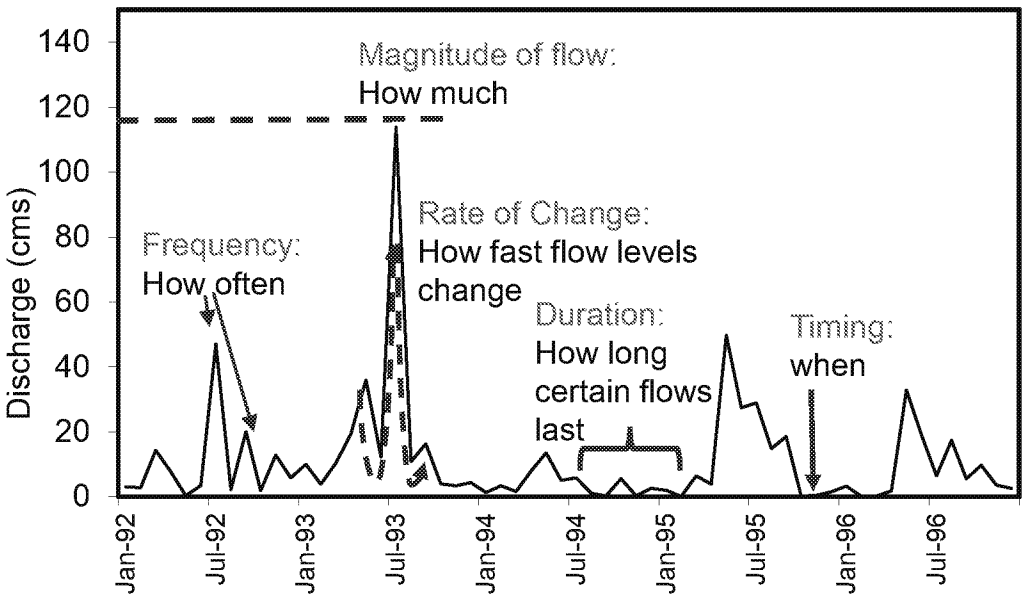
- "Science of water and ecology"
- New scientific way of managing the water cycle in order to achieve the sustainable use of water

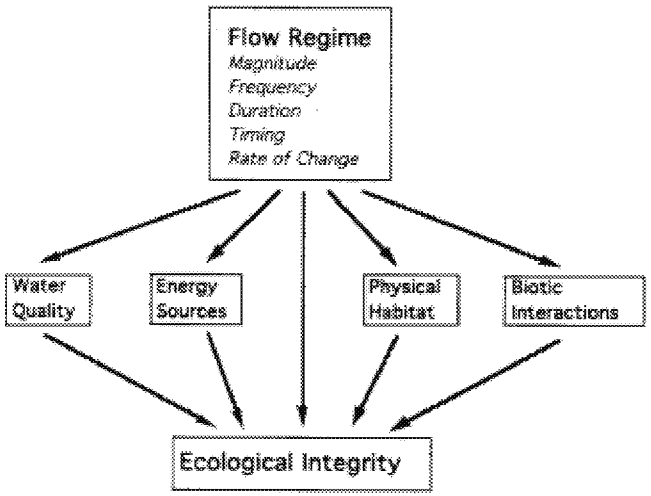


Picture credit: http://oregonstate.edu/instruct/anth481/ectop/ecservices.html

Natural Flow Regime and Ecological Process

The five components of the flow regime influence ecological integrity both directly and indirectly

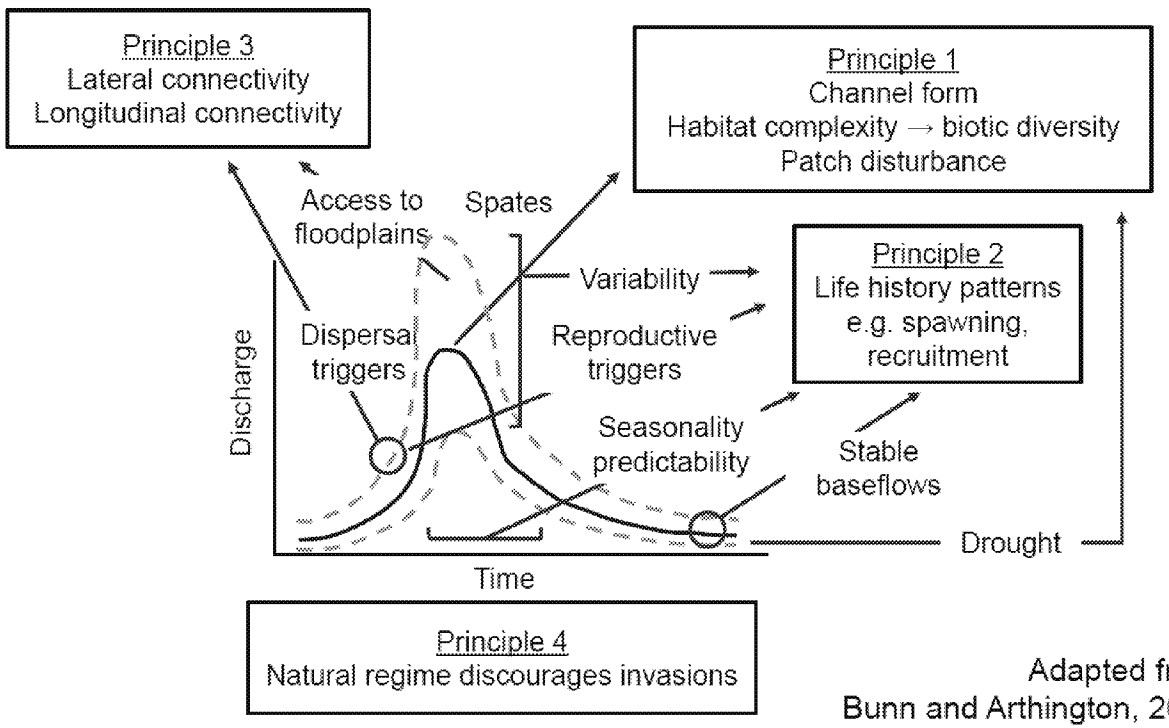




Poff et al., 1997; Graph adapted from Monk et al., 2011

Natural Flow regime and ecological process

- Specifics of magnitude, frequency, duration, timing and rate-of-change dictate ecological processes and outcomes.



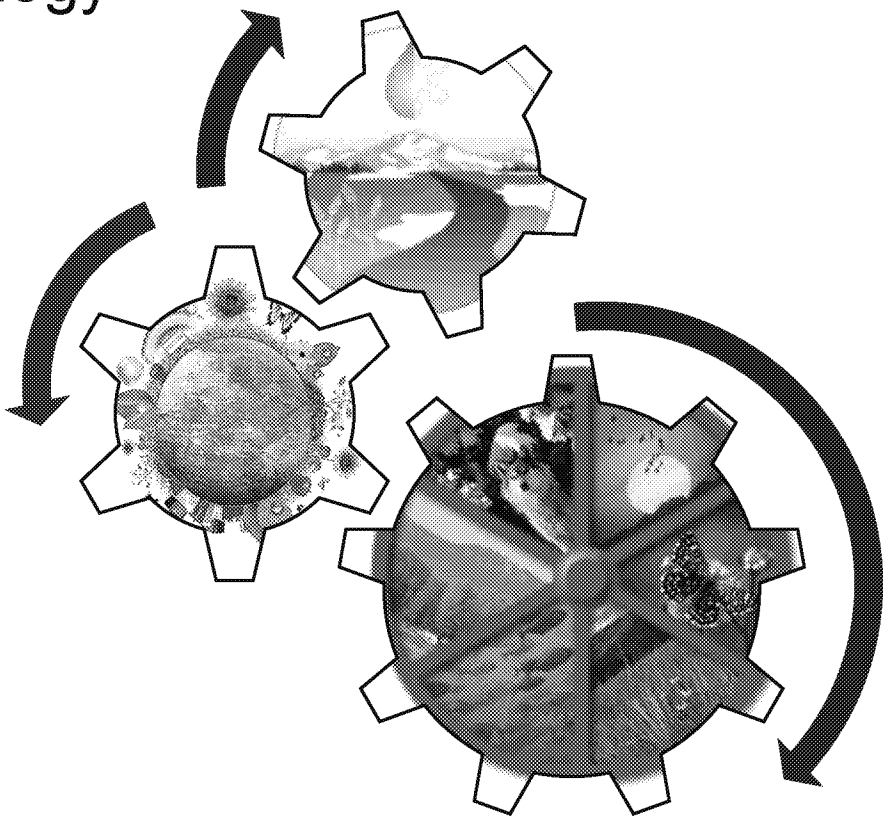
Adapted from
Bunn and Arthington, 2002

The Need for Ecohydrology

3 sequential components:

Hydrology

Ecology



Ecohydrology: regulation of hydrological and ecological processes, an integrated approach needed for River Basin Management

Ecological Engineering

The Need for Ecohydrology in Kansas

- Changes in the Great Plains rivers and consequent impacts have been documented
- Great Plains streams identified as highly endangered, and recommended as a model system for studying ecological disturbances
- Kanas River Basin (KRB) have had dramatic flow changes over the past several decades
- Significant warming and altered precipitation in the 21st century were reported
- These make KRB extremely vulnerable to drought
- Croplands and pasture cover majority of land

Angelo, 1994; Sophocleous, 1998, 2002; Dodds et al., 2004; Gido et al., 2010; Lin and Brunsell, 2013

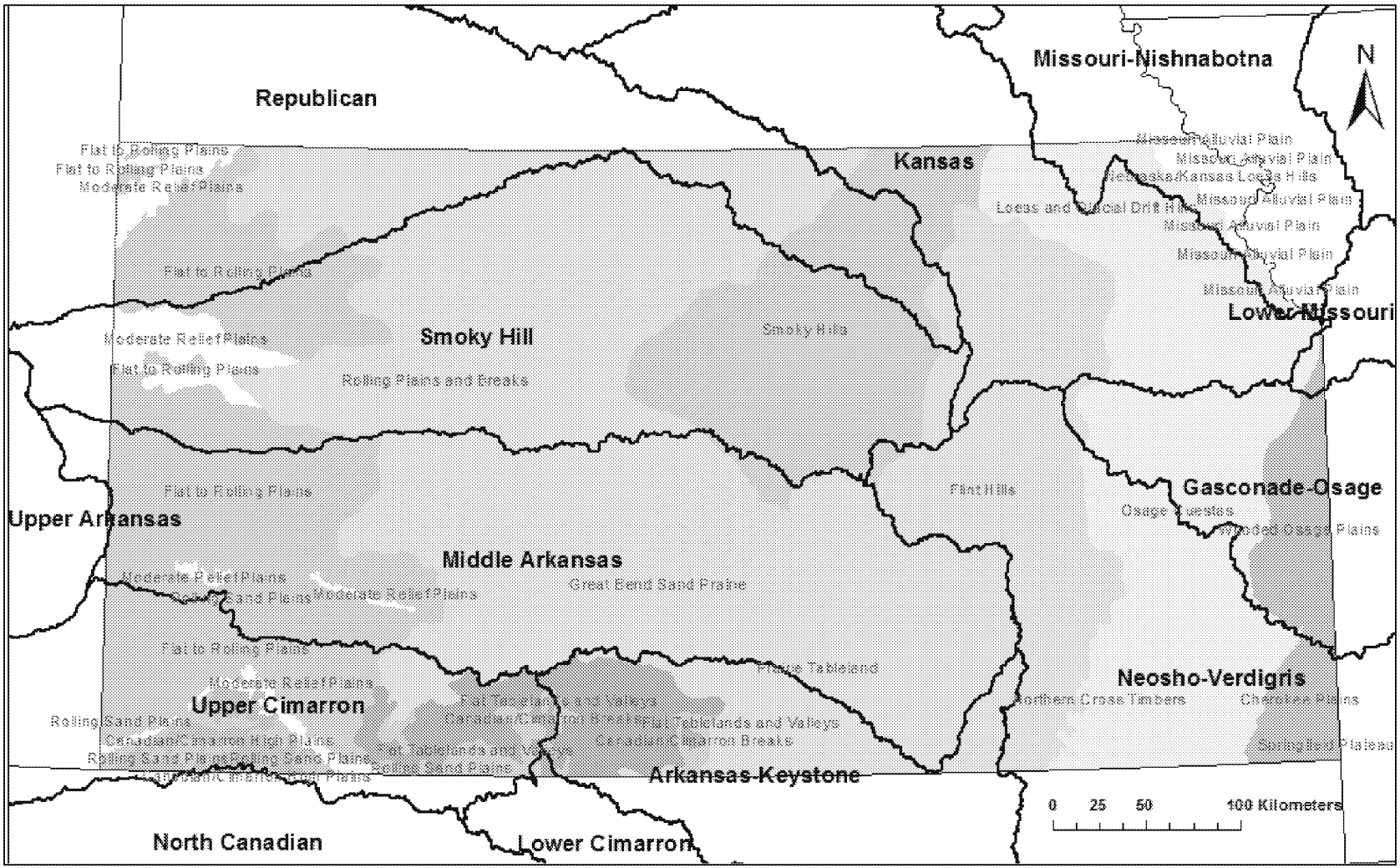
The Need for Ecohydrology in Kansas

Flow regulation by various forms of river impoundment has been linked to:

- reduced abundance of fish larvae
- suppressed growth rates
- altered community structure
- reduced species diversity and
- introduction of invasive plant species

Alexandre et al., 2013; Brown and Bauer, 2009;
Gido et al., 2013,; Perkin and Bonner, 2011

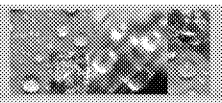
Major River Basins in Kansas



- Spatial variability in biophysical factors

Linking hydrological trends with fish presence and distribution

Ecohydrology



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WILEY

RESEARCH ARTICLE

Ecohydrological index, native fish, and climate trends and relationships in the Kansas River basin

Sumathy Sinnathamby[1,2] | Kyle R. Douglas-Mankin[1,3] | Muluken E. Muche[1,4] | Stacy L. Hutchinson[1] | Aavudai Anandhi[1,5]

[1] Biological and Agricultural Engineering, Kansas State University, 147 Seaton Hall, Manhattan, KS 66506, USA

[2] Oak Ridge Institute for Science and Education (ORISE) Postdoctoral Research Participant at U.S. Environmental Protection Agency, Office of Research and Development, National Exposure Research Laboratory, Watershed Exposure Branch, 960 College Station Rd., Athens, GA 30605, USA

[3] U.S. Geological Survey, New Mexico Water Science Center, Albuquerque, NM 87113, USA

[4] U.S. Environmental Protection Agency, Office of Research and Development, National Exposure Research Laboratory, Watershed Exposure Branch, 960 College Station Rd., Athens, GA 30605, USA

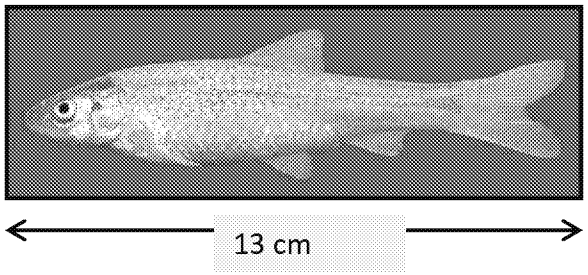
[5] Biological and Agricultural Systems Engineering, Florida A&M University, 1601 S Martin Luther King Jr. Blvd., Tallahassee, FL 32307, USA

Correspondence
Kyle R. Douglas-Mankin, Biological and Agricultural Engineering, Kansas State University, 147 Seaton Hall, Manhattan, KS

Abstract

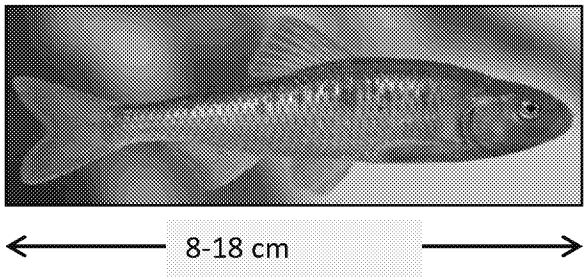
This study quantified climatological and hydrological trends and relationships to presence and distribution of 2 native aquatic species in the Kansas River basin over the past half century. Trend analyses were applied to indicators of hydrologic alteration (IHAs) at 24 streamgages over a 50-year period (1962–2012). Results showed a significant negative trend in annual streamflow for 10 of 12 western streamgages (up to −7.65 mm/50 years) and smaller negative trends for most other streamgages. Significant negative trends in western basin streamflow were more widespread in summer (12 stations) than in winter or spring (6 stations). The negative-trend magnitude and significance decreased from west to east for maximum-flow IHAs. Minimum-flow IHAs, however, significantly decreased at High Plains streamgages but significantly increased at Central Great Plains streamgages. Number of zero-flow days showed positive trends in the High Plains. Most streamgages showed negative trends in low- and high-flow pulse frequency and high-flow pulse duration, and positive trends in low-flow pulse duration. These results were consistent with increasing occurrence of drought. Shift in occurrence from present (1860–1950) to absent (2000–2012) was significantly related ($p < .10$) to negative trends of 1-day maximum flows (both species) and indices associated with reduced spawning-season flows for Plains Minnow and shifting annual-flow timing and increased flow intermittency for Common Shiner. Both species were absent for all western basin sites and had different responses to hydrological index trends at eastern basin sites. These results demonstrate ecohydrological index changes impact distributions of native fish and suggest target factors for assessment or restoration activities.

Linking hydrological trends with fish presence and distribution



Plains minnow(*Hybognathus placitus)*

- Threatened species
- Occurs in shallow perennial streams
- Started to decline since 1970



Common shiner

(*Luxilus cornutus)*

- In need of conservation
- Occurs in the streams with coarse substrate
- Started to decline in northwestern streams

Pictures credits: Bronson Waite, Chad Thomas, Texas State University-San Marcos, http://www.ux1.eiu.edu/~cfruf/bio4950/fish_id3.htm

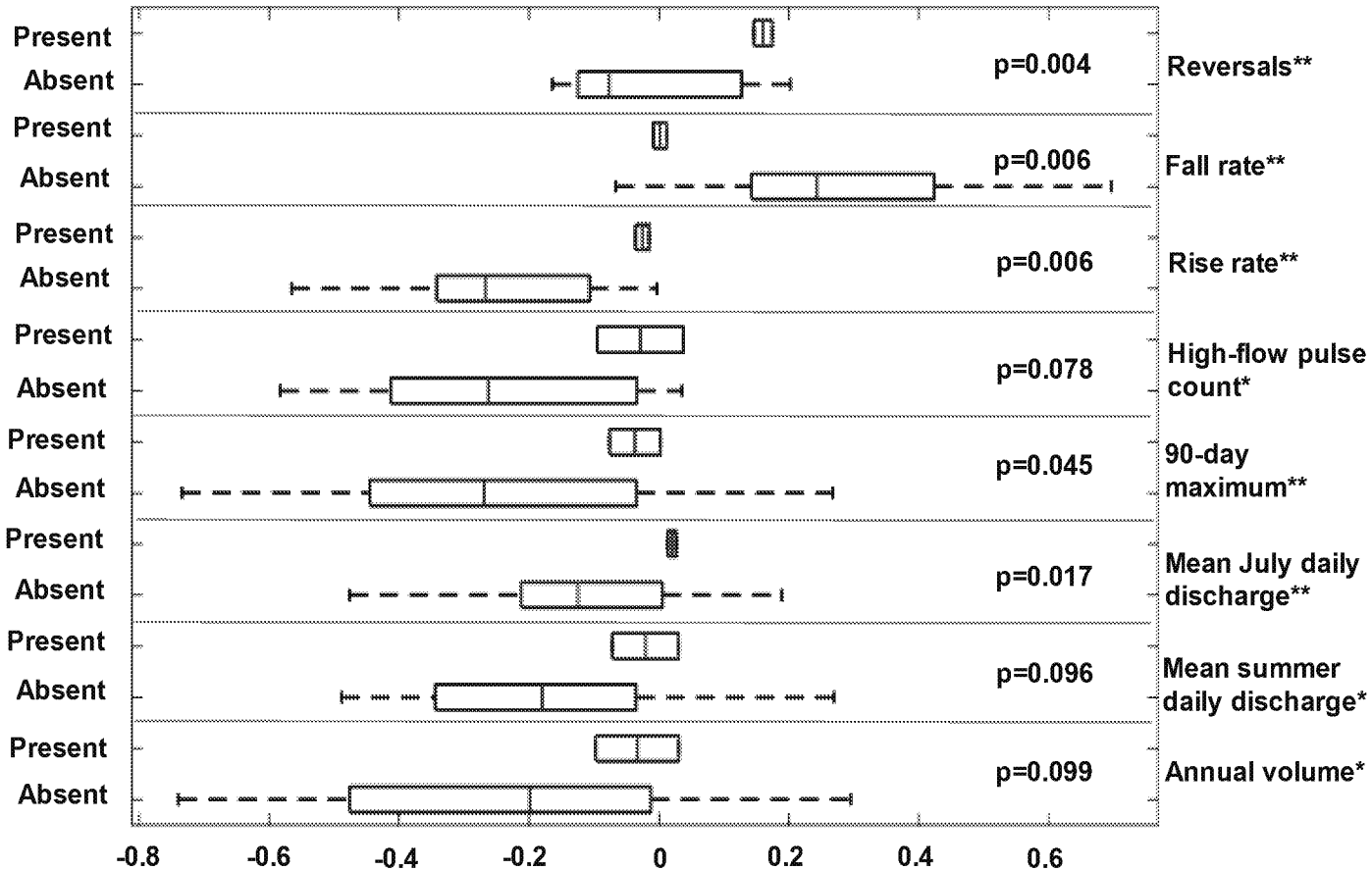
Methods: Ecological Influences

- 39 ecohydrological indicators
- Fish occurrence data (presence/absence) Kansas Aquatic Gap Database
- Close geographic proximity of fish survey and streamgage
- Two periods:
  - Historic (1860-1950) and
  - Present (2000-2012)
- A two-sample t-test (assuming unequal variance)

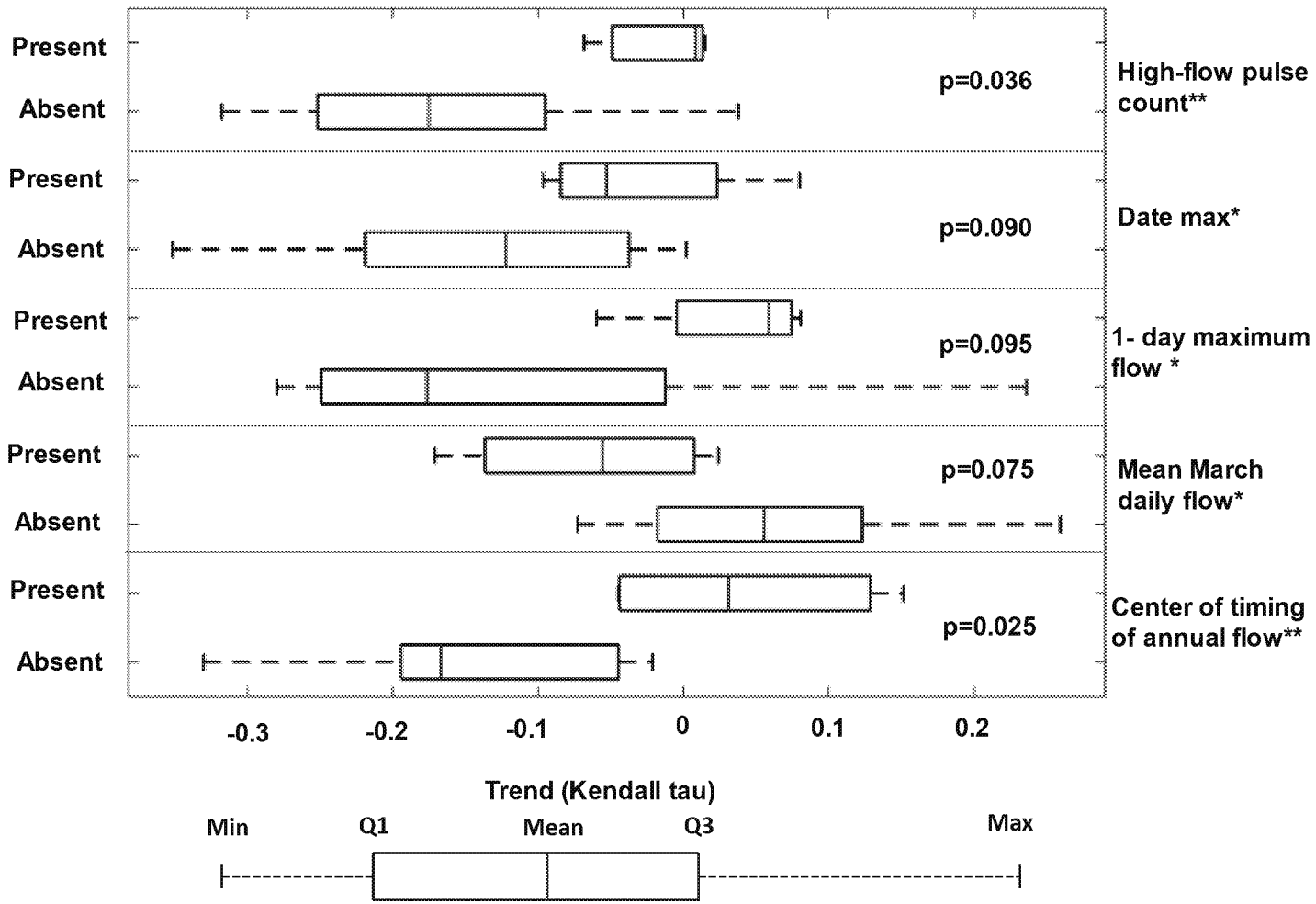
Table 4 Mean trends (Kendall tau, 1962-2012) of ecohydrological indicators for streamgages in the Kansas River Basin at which Plains Minnow or Common Shiner were either "Absent" or "Present" (2000-2012) after being present historically (1860-1950). Trend significance indicated at p = 0.05 ** and p = 0.10*.

	Plains Minnow			Common Shiner		
	Absent (tau) n=14	Present (tau) n=2	p value	Absent (tau) n=7	Present (tau) n=4	p value
Annual volume	-0.237	-0.033	**0.095***	-0.044	-0.037	0.933
Center of timing of annual flow	-0.080	-0.028	0.216	-0.143	0.042	**0.025****
Mean spring daily discharge	-0.125	0.052	0.308	0.092	0.005	0.333
Mean summer daily discharge	-0.190	-0.021	**0.088***	-0.067	0.011	0.357
Mean autumn daily discharge	-0.189	-0.094	0.179	-0.038	-0.069	0.697
Mean winter daily discharge	-0.142	-0.014	0.150	0.091	-0.013	0.211
October	-0.117	-0.037	0.175	0.016	-0.049	0.278
November	-0.132	-0.095	0.640	0.007	-0.029	0.519
Decemsber	-0.127	-0.014	0.165	0.060	0.003	0.465
January	-0.089	-0.009	0.256	0.113	0.020	0.355
February	-0.132	-0.023	0.168	0.057	-0.053	0.185
March	-0.143	-0.004	0.234	0.061	-0.065	**0.075***
April	-0.086	0.057	**0.102***	0.115	0.028	0.343
May	-0.097	0.039	0.247	0.106	0.012	0.220
June	-0.137	-0.013	0.151	0.015	0.002	0.829
July	-0.113	0.020	**0.012****	0.003	0.006	0.965
August	-0.064	-0.012	0.216	0.011	0.015	0.952
September	-0.137	-0.036	**0.082***	-0.022	-0.042	0.781
1-day min. flow	-0.019	-0.020	0.971	0.037	0.051	0.859
3-day min. flow	-0.019	-0.003	0.721	0.052	0.057	0.954
7-day min. flow	-0.025	0.002	0.554	0.053	0.049	0.953
30-day min. flow	-0.063	0.028	**0.105***	0.049	0.013	0.604
90-day min. flow	-0.114	-0.026	0.147	0.002	-0.027	0.707
1-day max. flow	-0.201	-0.036	**0.081***	-0.110	0.035	**0.095***
3-day max. flow	-0.220	-0.029	**0.109**	-0.104	-0.011	0.255
7-day max. flow	-0.228	-0.054	0.208	-0.103	-0.034	0.399
30-day max. flow	-0.237	-0.069	0.166	-0.094	-0.055	0.616
90-day max. flow	-0.237	-0.037	**0.034****	-0.065	-0.073	0.914
Zero-flow days	0.079	0.025	0.433	-0.032	0.048	0.351
Baseflow	-0.002	-0.017	0.728	0.067	0.066	0.996
Date of min. flow	0.077	0.006	0.412	0.049	0.052	0.932
Date of max. flow	-0.085	-0.104	0.890	-0.147	-0.031	**0.090***
Low-flow pulse count	0.024	0.005	0.636	-0.090	-0.087	0.953
Low-flow pulse duration	0.086	-0.035	0.330	0.098	-0.005	0.211
High-flow pulse count	-0.220	-0.029	**0.109**	-0.104	-0.010	0.255
High-flow pulse duration	-0.069	0.050	0.339	0.022	0.003	0.785
Rise rate	-0.171	-0.025	**0.034****	-0.061	-0.034	0.732
Fall rate	0.202	0.002	**0.015****	0.054	-0.034	0.270
Reversals	-0.016	0.160	**0.006****	0.152	0.064	0.454

Comparison of trends (Kendall tau, 1962-2012) in significant ecohydrological indicators at 16 streamgages in the Kansas River Basin at which Plains Minnow was either "Present" or "Absent" (2000-2012) after being present historically (1860-1950).

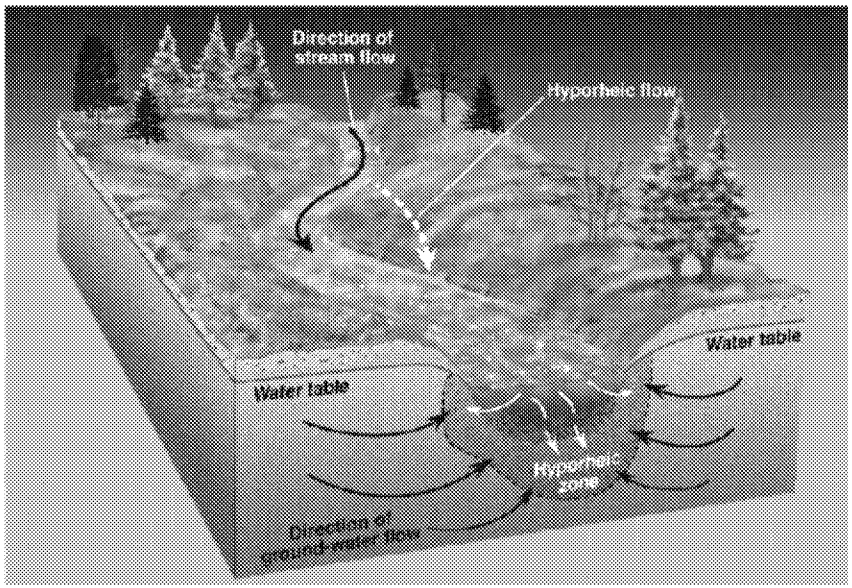


Comparison of trends (Kendall tau, 1962-2012) in significant ecohydrological indicators at 16 streamgages in the Kansas River Basin at which Common Shiner was either "Present" or "Absent" (2000-2012) after being present historically (1860-1950).



Ecological Influences

- Summer flow
  - Plains minnow: needs stable low flow for spawning, eggs are semi-buoyant in the current which allows the egg to develop above stream bed
  - Common shiner: spawns on riffles
- High flow pulses (count and duration)- loss of spawning cue (precise moment)
- Hyporheic zone (ecotone)
- Role of spring flow in sediment transport



EPA, 2009

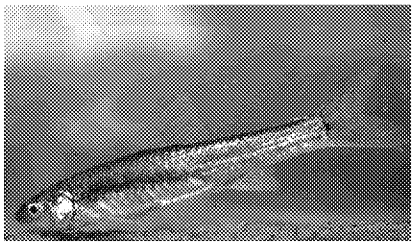
Current Study Objective

- Correlate fish presence with land use, hydrology and water quality changes

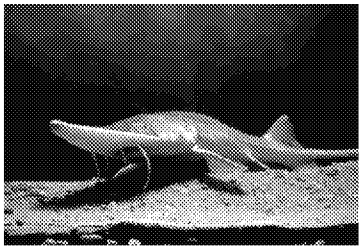
Methodology: Fish Data

- Most historical fish collection records (prior to 1991) from field notes of Frank Cross (Gido et al., 2010)
- Recent records were surveyed data by the Kansas Department of Wildlife and Parks, supplemented by various collectors with other governmental agencies and universities
- Time period: 1860 -2012
- 5 endangered fish species were identified

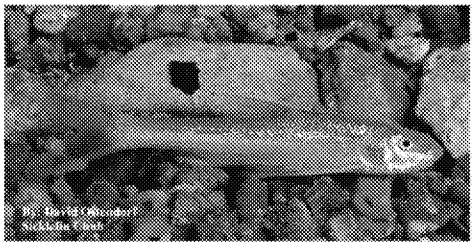
Endangered Species Selection



Arkansas River Shiner
Notropis Girardi
NOTGIR

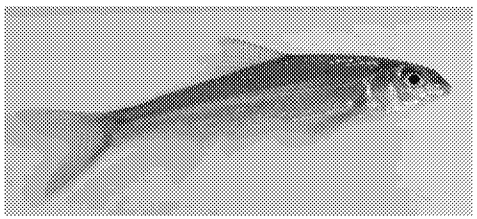


Pallid Sturgeon
Scaphirhynchus albus
SCAALB



Sicklefin Chub
Macrhybopsis meeki
MACMEE

Peppered Chub
Macrhybopsis tetranema
MACTET



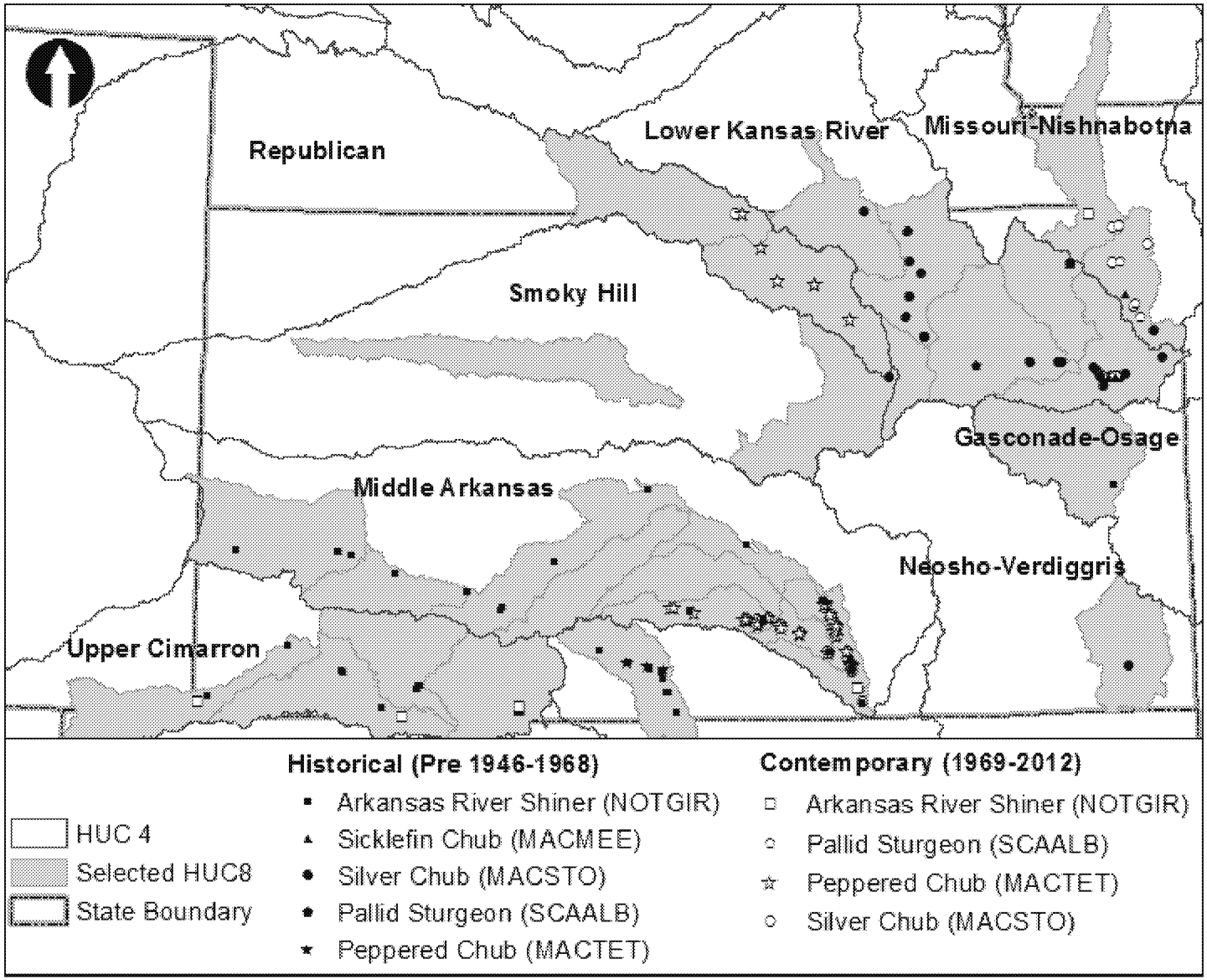
Silver Chub
Macrhybopsis storeriana
MACSTO

Family:

- Pallid Sturgeon: Acipenseridae, Sturgeon family
- Others: Cyprinidae, Carp and Minnow family

Photo courtesy of Center for Biological Diversity, US Fish and Wildlife services, KSU, David Ostendorf, Ohio Department of Natural Resources

Study Area

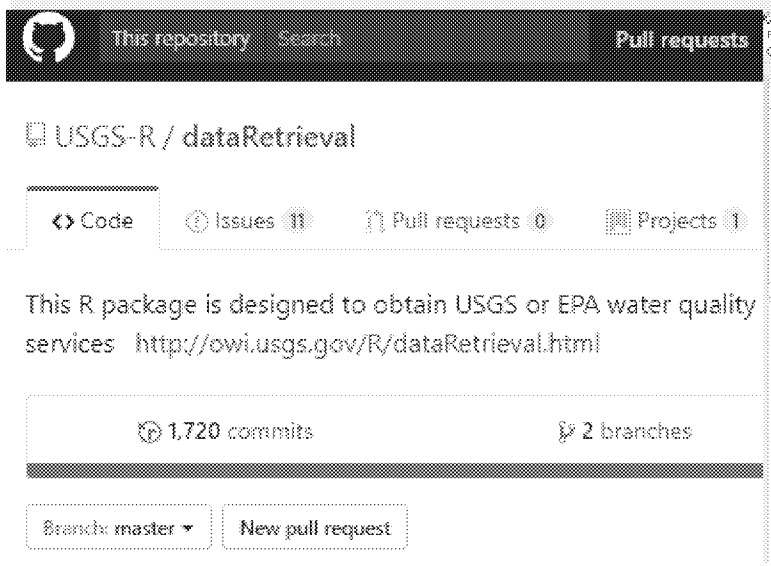

Republican
Lower Kansas River
Missouri-Nishnabotna
Smoky Hill
Gasconade-Osage
Middle Arkansas
Neosho-Verdiggris
Upper Cimarron
HUC 4
Selected HUC8
State Boundary
Historical (Pre 1946-1968)
Arkansas River Shiner (NOTGIR)
Sicklefin Chub (MACMEE)
Silver Chub (MACSTO)
Pallid Sturgeon (SCAALB)
Peppered Chub (MACTET)
Contemporary (1969-2012)
Arkansas River Shiner (NOTGIR)
Pallid Sturgeon (SCAALB)
Peppered Chub (MACTET)
Silver Chub (MACSTO)

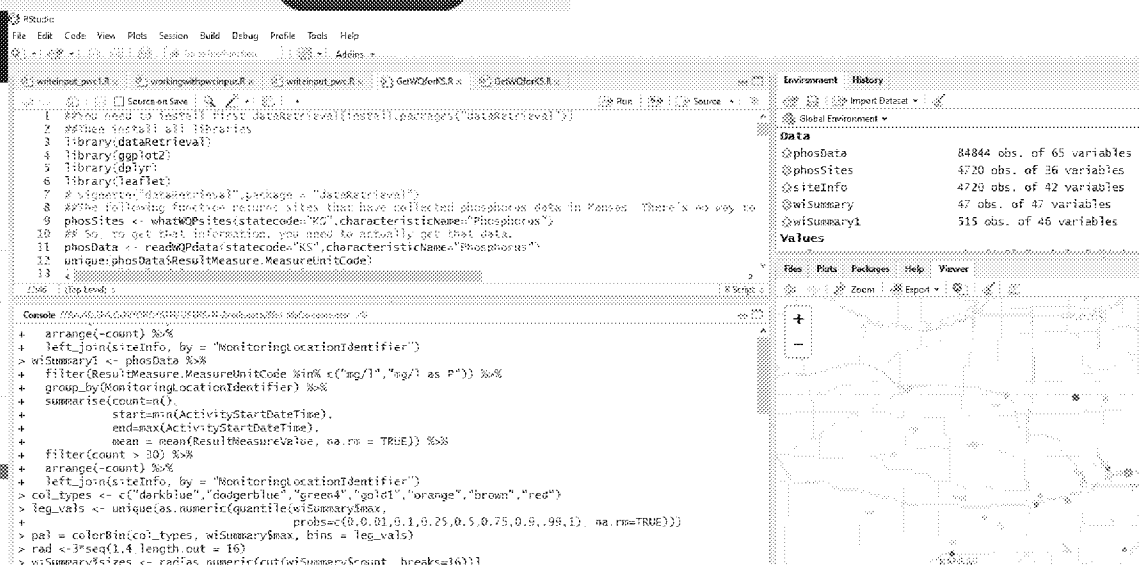
Variables

1. Land use: % Natural, % Agriculture, % Developed
2. Streamflow (IHA)
3. Average annual precipitation (mm)
4. Suspended sediment concentration- SSC (mg/L)
5. Nitrate (mg/L)
6. Water temperature (^{o}C)
7. Total phosphorous(mg/L)
8. Atrazine (ug/L)
9. Major dams and fragmentation (with 50 feet or more in height, or with a normal storage capacity of 5,000 acre-feet) (https://nationalmap.gov/small_scale/mld/dams00x.html)

Water Quality Data Retrieval

- Water Quality Portal (WQP) data was downloaded using modified USGS-R/ dataRetrieval tool
- USGS data comes from the NWIS database and EPA data comes from the STORET database.





Methodology

- Two different groups for statistical tests
- Identify differences between historic (pre-1968) and contemporary (1969–2012) parameter means
- Identify differences in fish distribution through time (done separately for each species)
  - ✓ Stable sites: historically and currently present
  - ✓ Flourishing/booming sites: historically absent, currently present
  - ✓ Extirpated sites: historically present, currently absent

Preliminary Results

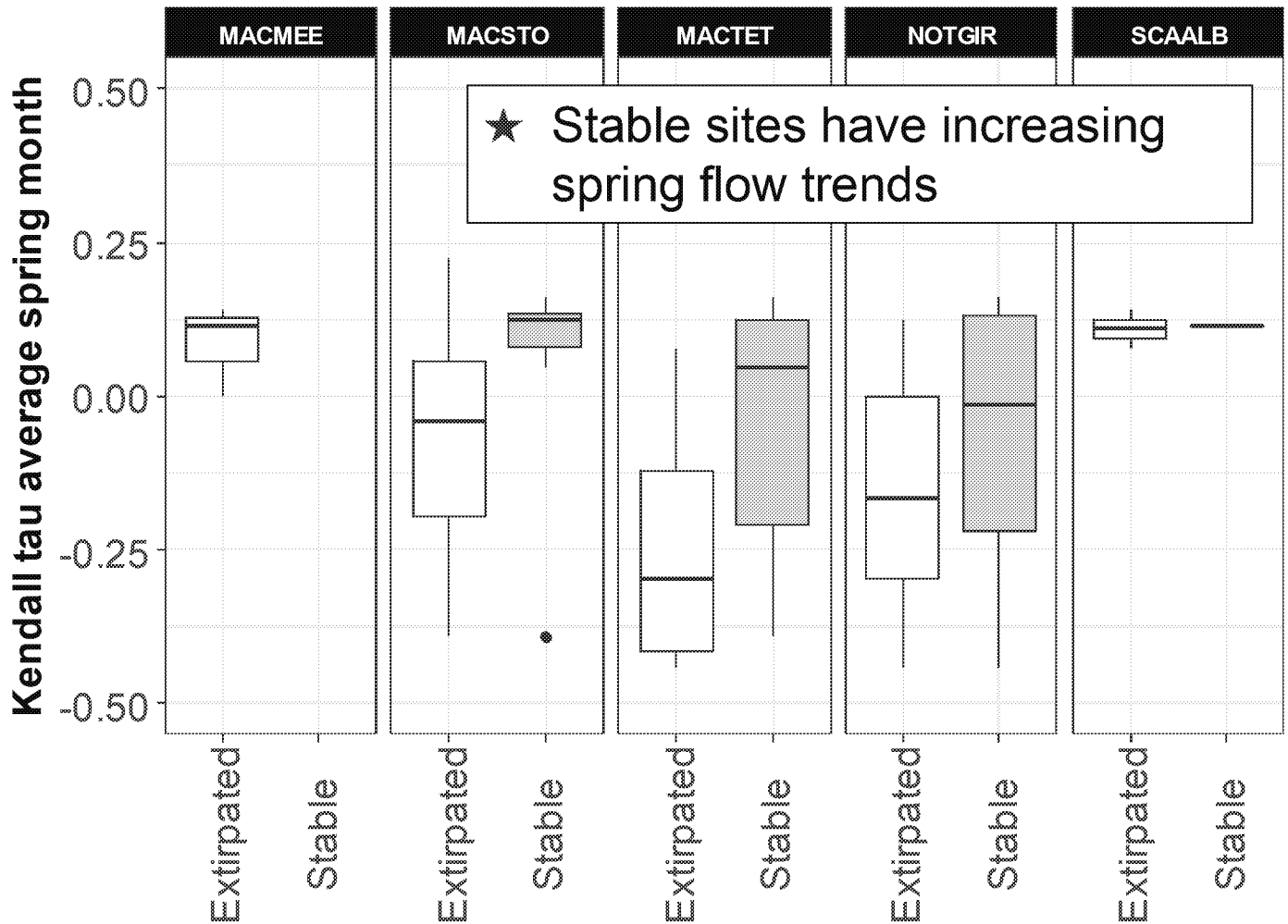
2-sample test for equality of proportions

Species	Prop (Historical)	Prop (Contemporary)	P-value	chi-square
MACSTO	0.44	0.19	0.01	5.90
MACMEE	0.50	0.00	0.04	4.05*
MACTET	0.50	0.17	0.01	7.60
NOTGIR	0.50	0.13	0.00	12.10
SCAALB	0.50	0.17	0.35	0.87*

* low n approximation

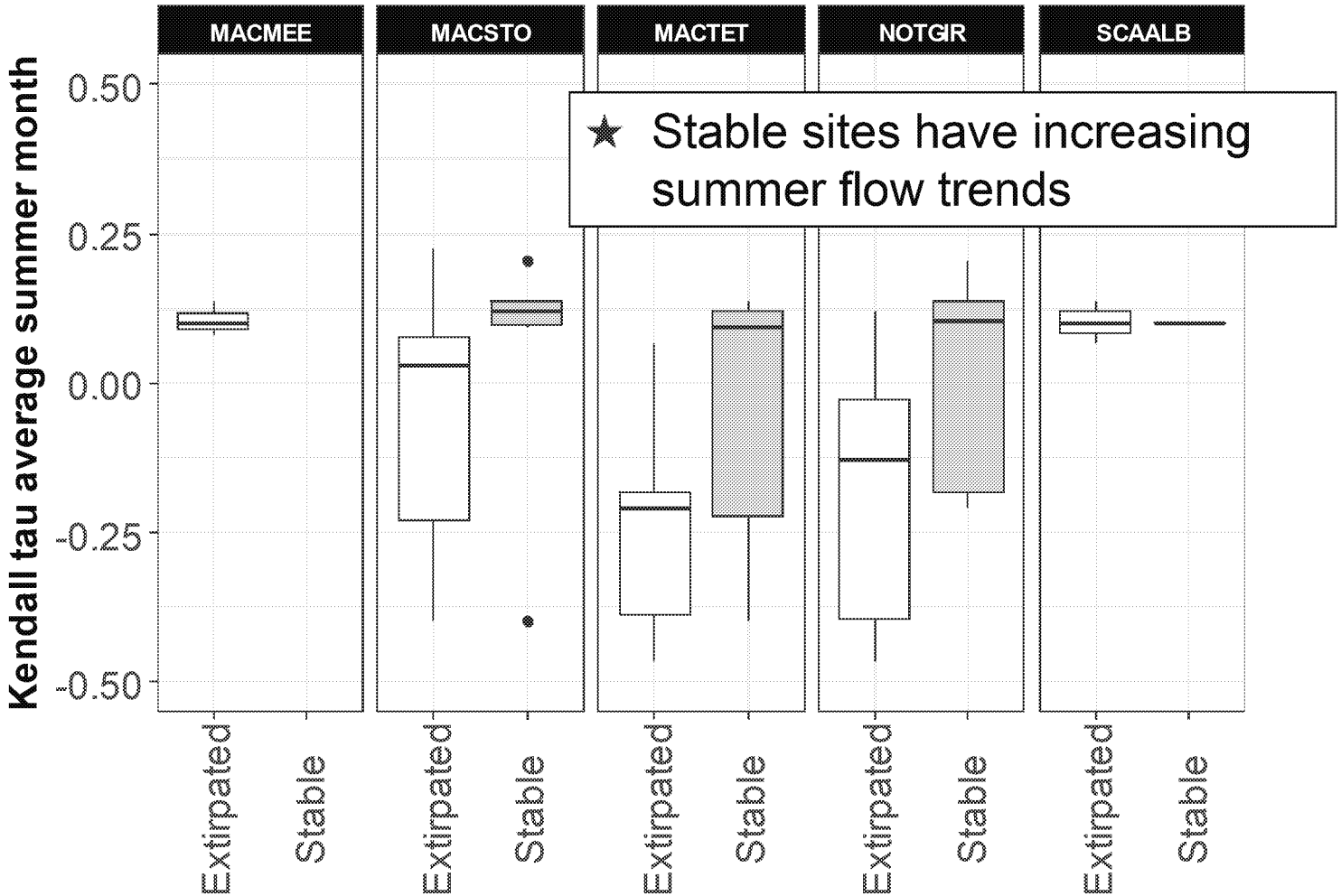
★ Historical and contemporary are significantly different for four species except SCAALB

Preliminary Results: spring flow trend

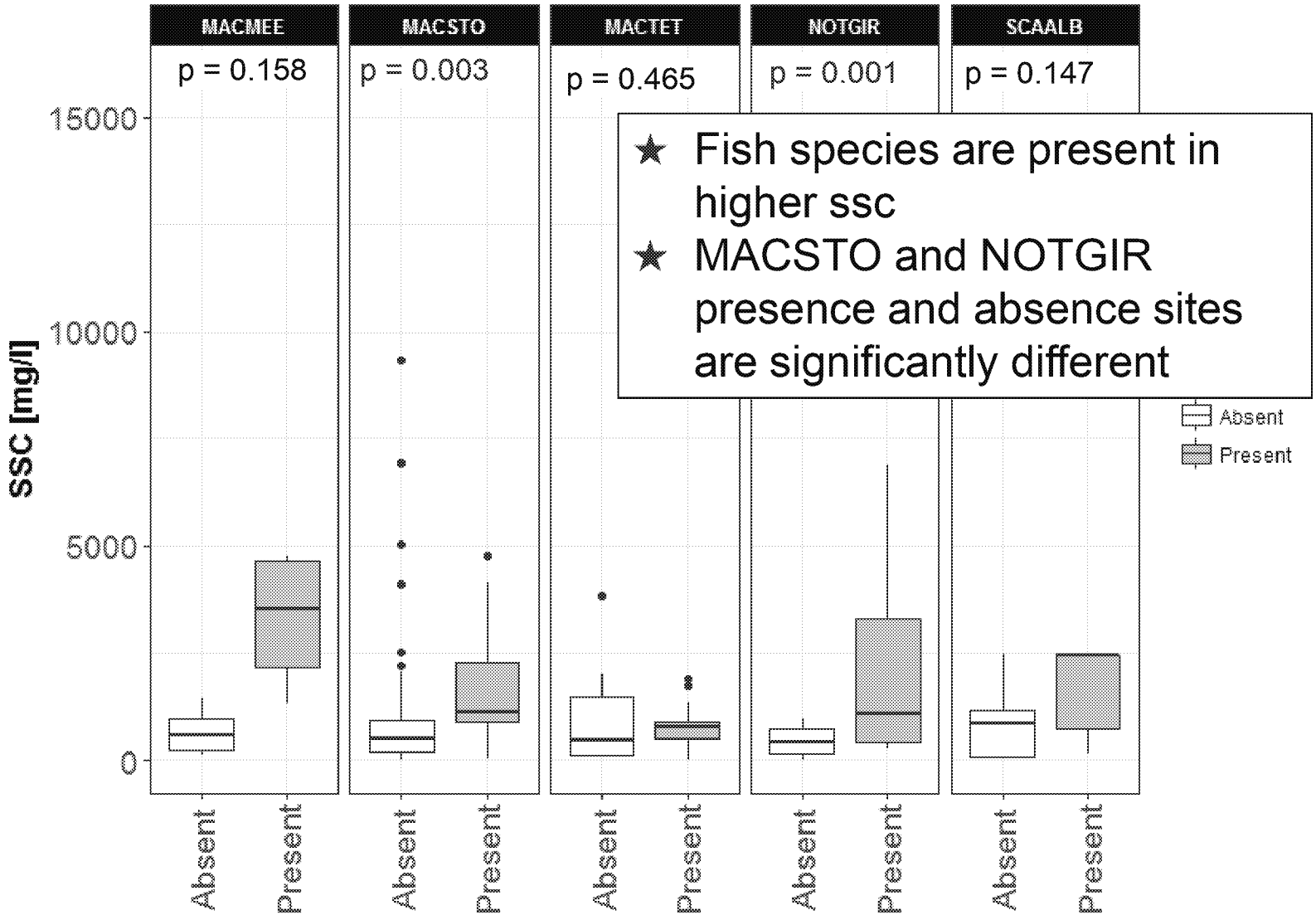


- IHA
- Mann-kendall trend test (MATLAB)

Preliminary Results: summer flow trend

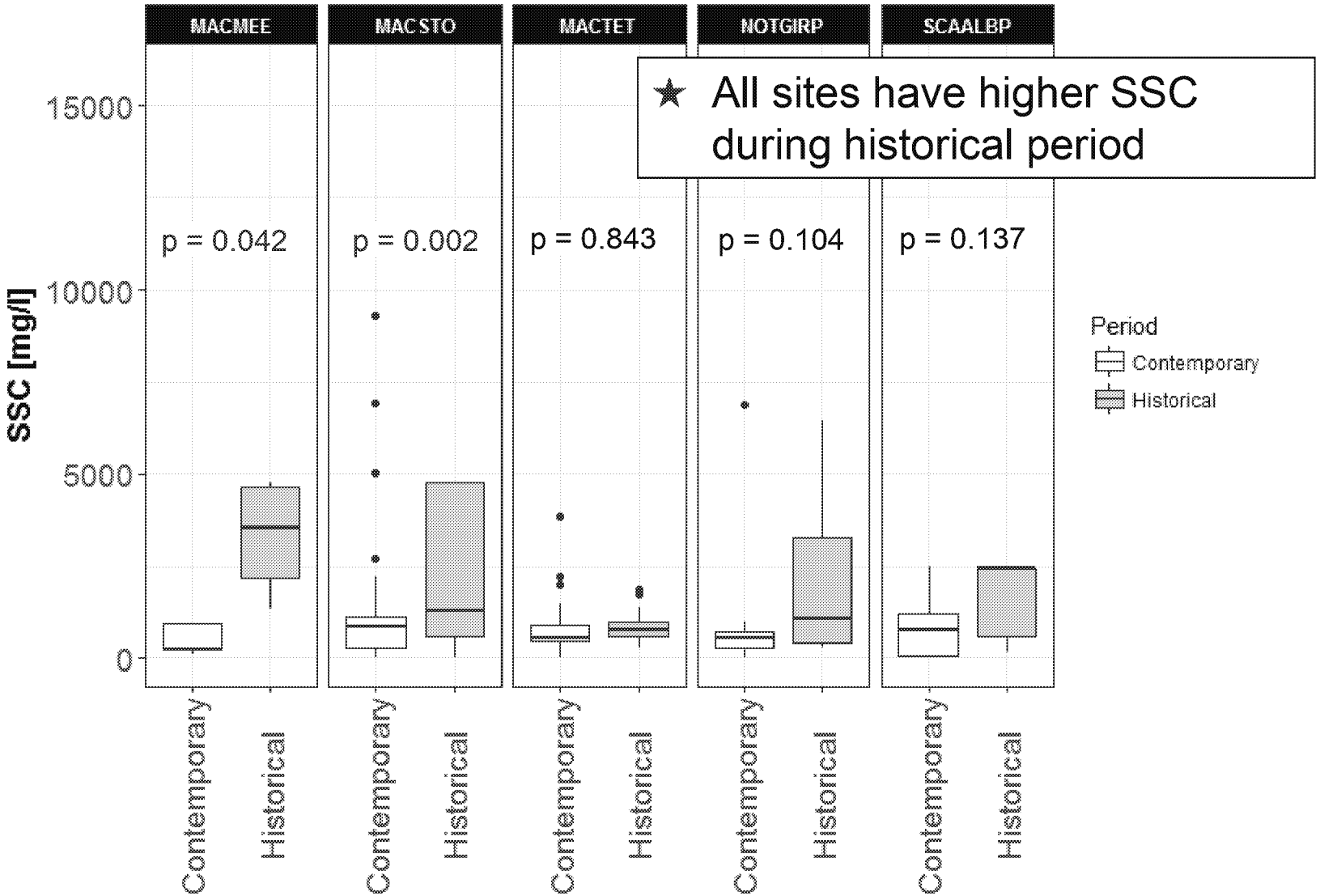


Preliminary Results: Suspended Sediment Concentration (SSC)

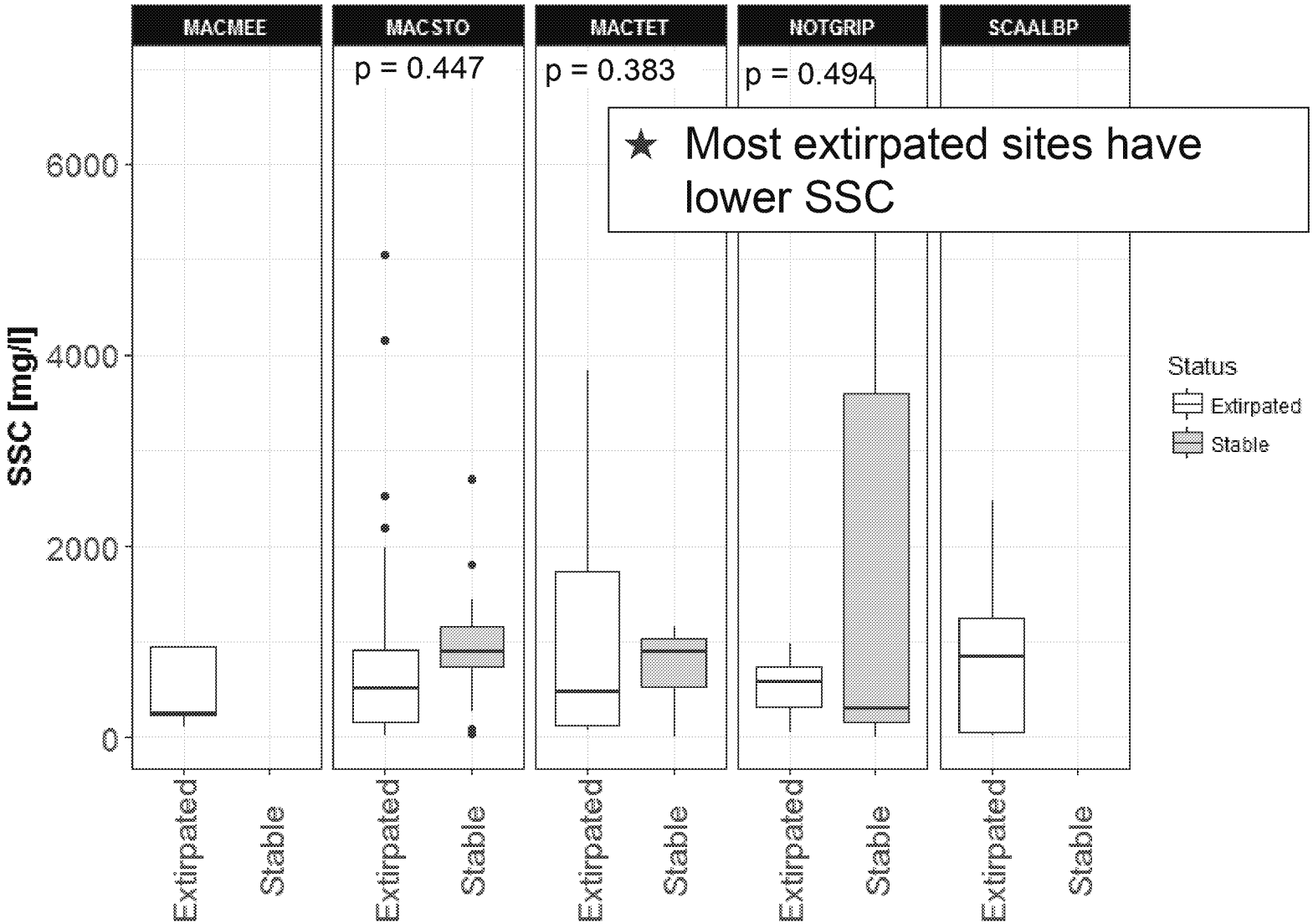


- ★ Fish species are present in higher ssc
- ★ MACSTO and NOTGIR presence and absence sites are significantly different

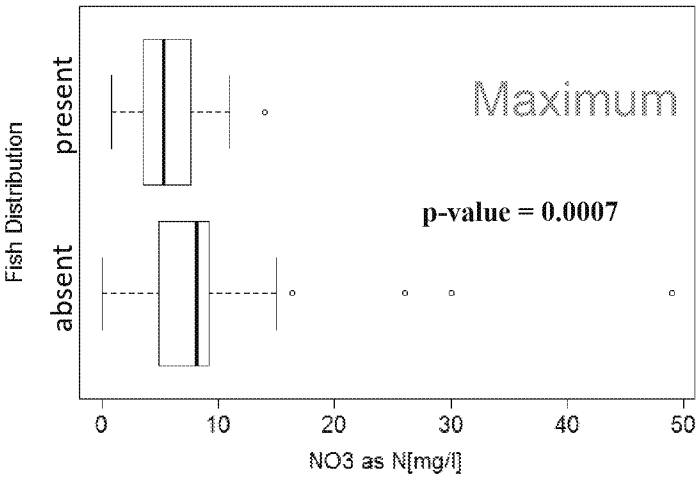
Preliminary Results: SSC Contemporary vs Historical

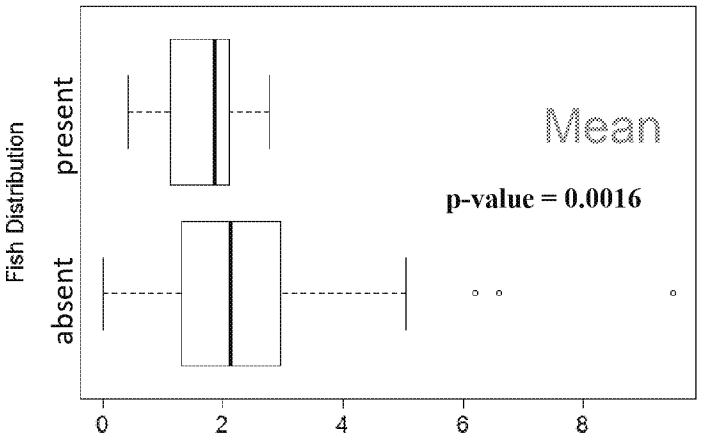


Preliminary Results: SSC Extirpated vs Stable

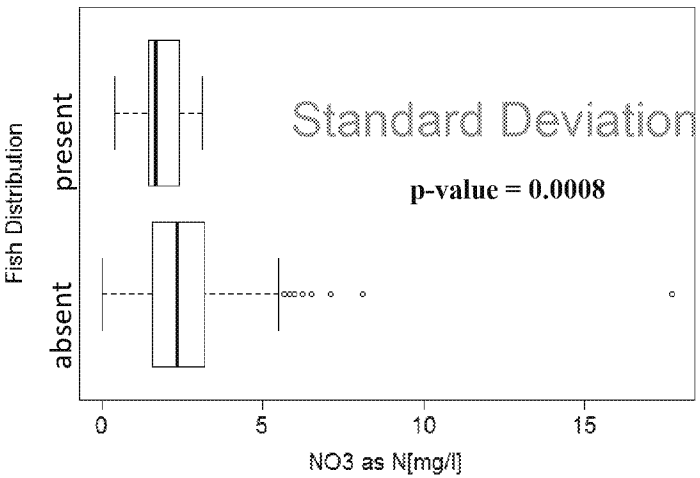


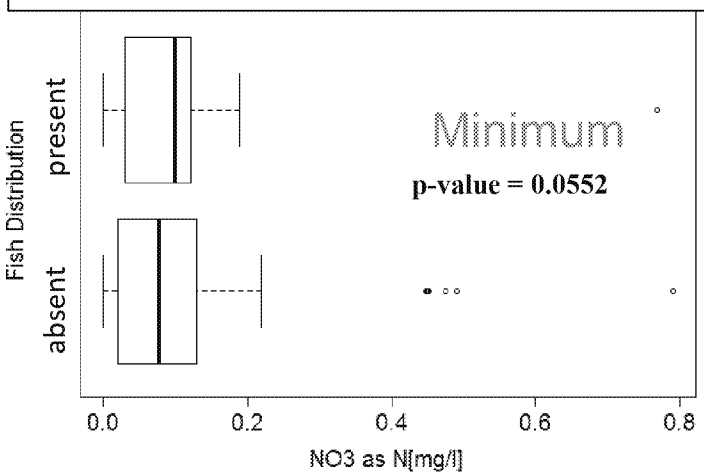
Preliminary Results: Silver Chub – NO_3^-





★ Silver Chub absent sites have higher NO3 ($p < 0.05$)





Conclusions Based on Preliminary Results

- Water quality parameters and flow characteristics significantly affected the presence/absence of fish species in Kansas streams
- The proportions of occurrence for all species examined declined in the contemporary period relative to the historic period
- Higher SSC was related to higher occurrence of endangered species
- Lower NO_3 concentration was related to higher occurrence of silver chub
- Similar analyses will be performed for the remaining species once all necessary data have been processed

Acknowledgments

Tom Purucker and Keith Gido

This presentation has been reviewed and approved in accordance with Agency policy. The views expressed in this presentation are those of the author(s) and do not necessarily represent the views or policies of the U.S. Environmental Protection Agency.

Message

From: Beck, Nancy [Beck.Nancy@epa.gov]
Sent: 10/31/2017 2:37:05 PM
To: Bowman, Liz [Bowman.Liz@epa.gov]
CC: Sands, Jeffrey [sands.jeffrey@epa.gov]; Bennett, Tate [Bennett.Tate@epa.gov]; Dourson, Michael [dourson.michael@epa.gov]
Subject: PPDCA draft remarks
Attachments: PPDC draft remarks.2.docx

Liz—slightly updated for your review.
I appreciate any suggestions—thanks everyone! This is meant to be short intro remarks..

****

Nancy B. Beck, Ph.D., DABT
Deputy Assistant Administrator
Office of Chemical Safety and Pollution Prevention
P: 202-564-1273
M: Ex. 6
beck.nancy@epa.gov

Message

From: Colleen Willard [willard@ncga.com]
Sent: 11/16/2017 8:51:22 PM
To: Sands, Jeffrey [sands.jeffrey@epa.gov]
Subject: RE: Meeting Request

Hi Jeffrey,

Thank you for your email and willingness to meet with Mr. Skunes. Is 10:00 a.m. on December 8th an agreeable time for you? Mr. Skunes is interested in discussing pesticides and the renewable fuel standard.

Best,
Colleen

Colleen M. Willard
Director, Public Policy
National Corn Growers Association
20 F Street NW, Suite 600
Ex. 6 Direct
willard@ncga.com

From: Sands, Jeffrey [mailto:sands.jeffrey@epa.gov]
Sent: Thursday, November 16, 2017 9:11 AM
To: Colleen Willard <willard@ncga.com>
Subject: Meeting Request

Good morning Colleen,

Hope this note finds you well. I wanted to touch base regarding your meeting request for NCGA President Kevin Skunes.

Due to previous commitments on the Administrator's calendar for December 7&8, he will not be able to join for a meeting with Mr. Skunes. I would, however, like to offer my time to meet with NCGA at your preference for either of those days. Please let me know of a time on the 7th&8th that works best for your team and also any issues you would like to discuss so I can work to make sure the meeting is fully accommodated from our end.

I appreciate your understanding and consideration, I look forward to hearing from you in the near future.

Best,

Jeffrey Sands
Senior Advisor to the Administrator for Agriculture Policy
1200 Pennsylvania Ave, NW
2415 WJC North
Washington, DC 20460
(202) 564-2263

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received this communication in error, please delete it without copying or forwarding it, and notify the sender of the error by reply email.

Message

From: Claire Perlman [Claire.Perlman@propublica.org]
Sent: 2/16/2018 4:28:58 PM
To: Sands, Jeffrey [sands.jeffrey@epa.gov]
Subject: Story on EPA ethics waiver

Hi Jeffrey,

I'm with ProPublica, and I'm writing a post about your ethics pledge waiver with the EPA, specifically the possible conflicts of interest that remain with your previous lobbying work at Syngenta and Agricultural Retailers Association and your current role at the EPA. Do you have any comment on the steps you're taking to recuse yourself from any areas in which you have a conflict of interest? For example, are you working on any issues involving atrazine?

Feel free to email me or call me at the number below.

Thanks,

Claire Perlman
ProPublica
www.propublica.org
Ex. 6

Message

From: Subramanian, Hema [Subramanian.Hema@epa.gov]
Sent: 12/12/2017 3:45:26 PM
To: Sands, Jeffrey [sands.jeffrey@epa.gov]
Subject: RE: Ag Biogenic CO2

Thanks, just let me know if you'd like me to coordinate with Alex Dominguez and set up this meeting. Hope Denver is going well!

Hema Subramanian
Special Assistant to the Senior Advisor for Agriculture (detail)
Office of the Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Phone (202) 564-5041
subramanian.hema@epa.gov

From: Sands, Jeffrey
Sent: Tuesday, December 12, 2017 10:39 AM
To: Subramanian, Hema <Subramanian.Hema@epa.gov>
Subject: Fwd: Ag Biogenic CO2

FYI....

Sent from my iPhone

Begin forwarded message:

> **From:** Kyle Harris <kharris@corn.org>
> **Date:** December 12, 2017 at 8:37:08 AM MST
> **To:** "sands.jeffrey@epa.gov" <sands.jeffrey@epa.gov>
> **Subject: Ag Biogenic CO2**
>
> My name is Kyle Harris and I manage the Environmental Affairs for the Corn Refiners Association, who chairs the Biogenic CO2 Coalition (please find our 1-pager attached).
>
> I would appreciate the opportunity to come and brief you on our issue, which involves air emissions from the processing and/or combustion of short-cycle herbaceous crops. The Ag sector is poised to invest billions of dollars throughout the United States to expand the bioeconomy, which can provide 21st century solutions to economic growth, domestic energy security, and environmental benefits in the form of bioenergy, biofuels, and bioproducts made from corn, oilseeds, crop residues, farm wastes and other agricultural feedstocks.
>
> We have been working on this issue closely with OAR, and Alex Dominguez has kindly given me your contact information.
>
> Please advise any times that may work for you and your team where we could sit down and further discuss.
>
> Thanks in advance,

Kyle

Kyle A. Harris, Esq.
Manager, Environmental Affairs/ Workplace Safety
Corn Refiners Association
www.corn.org
1701 Pennsylvania Ave NW
Suite 950, Washington, DC 20006
Office:
Cell: (
Ex. 6

Message

From: Baptist, Erik [baptist.erik@epa.gov]
Sent: 11/15/2017 4:47:31 PM
To: Dravis, Samantha [dravis.samantha@epa.gov]; Gunasekara, Mandy [Gunasekara.Mandy@epa.gov]; Bodine, Susan [bodine.susan@epa.gov]; Traylor, Patrick [traylor.patrick@epa.gov]; Sands, Jeffrey [sands.jeffrey@epa.gov]
Subject: FW: Reuters: Struggling Philadelphia refiner sells biofuel credits, raises cash: sources, 11/15/17

FYI

Erik Baptist
Senior Deputy General Counsel
Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsyvlania Ave., NW
Washington, DC 20460
(202) 564-1689
baptist.erik@epa.gov

From: Sorokin, Nicholas
Sent: Wednesday, November 15, 2017 11:32 AM
To: AO OPA OMR CLIPS <AO_OPA_OMR_CLIPS@epa.gov>
Subject: Reuters: Struggling Philadelphia refiner sells biofuel credits, raises cash: sources, 11/15/17

Reuters
http://www.reuters.com/article/us-refineries-biofuels-philadelphia/struggling-philadelphia-refiner-sells-biofuel-credits-raises-cash-sources-idUSKBN1DE2UU
Struggling Philadelphia refiner sells biofuel credits, raises cash: sources
By Jarrett Renshaw and Chris Prentice, 11/14/17

NEW YORK (Reuters) - Oil refiner Philadelphia Energy Solutions (PES) has raised tens of millions of dollars in cash by selling U.S. biofuels credits in recent weeks, according to sources familiar with the transactions, an unusual move for a company that requires the credits to meet federal regulations.

The U.S. Renewable Fuel Standard (RFS) requires oil refiners to blend increasing amounts of biofuels like ethanol into their fuels every year, or purchase credits from those who do. Independent refiners like PES, lacking blending facilities, typically are dependable buyers in the niche market.

Over the past several weeks, PES has sold roughly 40 million credits in clips of roughly 5 million at a time, according to one of the sources. During that time they have not bought any credits, the source said.

The second source said PES was selling credits recently, but did not have specific volumes.

Officials at PES declined to confirm or comment on the sales. In August, the company's chief executive told employees in a letter that it had hired financial and legal advisors to look at ways to tackle its debt burden. Included in the PES debt load is a $550 million term loan that comes due early next year.

Sources told Reuters the company tapped investment bank PJT Partners Inc

Last year, the Philadelphia refiner disclosed that it had sold credits and amassed the equivalent of a $111.4 million short position. The company still has a significant short position, according to other sources familiar with its finances.

PES is majority owned by private equity firm Carlyle Group. Energy Transfer Partners, which owns a minority stake, disclosed the company's detailed financial statements in its annual report filed in February. Subsequent quarterly reports did not update PES's position.

One possible reason behind the short position is that refiners can defer buying or sell credits to manage cash flow. The company might also believe prices for the biofuels credits will fall before the refiner must hand them in to the Environmental Protection Agency in March 2018 to meet the requirements of the RFS.

Pennsylvania's Democratic Governor Tom Wolf in October asked the administration of President Donald Trump to grant a waiver that would reduce the number of credits PES and other refiners need to purchase this year and in 2018.

Such a waiver would likely reduce prices for the credits.

"It looks like it could be a clever play, but frankly, it might be the only option they have to stay afloat," Ed Hirs, an energy economist at the University of Houston said. "They have found a way to borrow money using the EPA."

An EPA spokesperson said the agency was still reviewing the request, adding administrator Scott Pruitt will not take "any steps to undermine the objectives in the statute of the RFS."

PES took on the $550 million term loan five years ago after Carlyle and Sunoco Inc cut a deal, supported by tax breaks and grants, to rescue the company.

Biofuels credits are now trading above 90 cents. That is up from this year's low of 34 cents in March when billionaire investor and refinery owner Carl Icahn was proposing price-crushing changes to the biofuels program as an unpaid advisor to Trump – a role from which he has since resigned.

Under pressure from the corn lobby, the EPA has said it does not plan to adopt Icahn's proposals.

Like PES, Icahn's refining company, CVR Energy, had a short position in the credit market when he was advising the White House. The U.S. attorney's office out of Manhattan is investigating his actions.

The Renewable Fuel Standard was introduced under former President George W. Bush more than a decade ago as a way to reduce imports, help farmers, and cut pollution. The regulation has helped corn growers, but has hurt refiners.

PES said the program cost it $250 million last year, more than its payroll, and blamed it for jobs cuts and reduced pension benefits.

Nicholas Sorokin
Office of Media Relations Intern
U.S. Environmental Protection Agency
Telephone: (202) 564-5334
sorokin.nicholas@epa.gov

Message

From: Kyle Harris [kharris@corn.org]
Sent: 12/12/2017 3:37:08 PM
To: Sands, Jeffrey [sands.jeffrey@epa.gov]
Subject: Ag Biogenic CO2
Attachments: Biogenic CO2 Coalition - 1-pg Overview (3-13-17).pdf

My name is Kyle Harris and I manage the Environmental Affairs for the Corn Refiners Association, who chairs the Biogenic CO2 Coalition (please find our 1-pager attached).

I would appreciate the opportunity to come and brief you on our issue, which involves air emissions from the processing and/or combustion of short-cycle herbaceous crops. The Ag sector is poised to invest billions of dollars throughout the United States to expand the bioeconomy, which can provide 21st century solutions to economic growth, domestic energy security, and environmental benefits in the form of bioenergy, biofuels, and bioproducts made from corn, oilseeds, crop residues, farm wastes and other agricultural feedstocks.

We have been working on this issue closely with OAR, and Alex Dominguez has kindly given me your contact information.

Please advise any times that may work for you and your team where we could sit down and further discuss.

Thanks in advance,

Kyle

Kyle A. Harris, Esq.
Manager, Environmental Affairs/ Workplace Safety
Corn Refiners Association
www.corn.org
1701 Pennsylvania Ave NW
Suite 950, Washington, DC 20006
Office
Cell: (Ex. 6

CORN REFINERS ASSOCIATION

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Please consider the environment before printing this email

BIOGENIC CO_2 COALITION

Members

American Bakers Association

American Farm Bureau Federation

Corn Refiners Association

Enginuity Worldwide

National Corn Growers Association

National Cotton Council of America

National Cottonseed Products Association

National Oilseed Processors Association

North American Millers' Association

The Biogenic CO_2 Coalition supports science-based recognition that agricultural biogenic CO_2 emissions are not harmful greenhouse gases and opposes EPA's overreach in regulating sustainability on farms.

Agriculture is key to the 21st century bioeconomy that includes feeding America and the expansion of bioproducts such as bioplastics, composites, and intermediates made from corn, oilseeds and other agricultural feedstocks. According to the federal government, the bioeconomy in 2013 was valued at $369 billion, provided 4 million American jobs, and was the leading source of domestic renewable energy. The bioeconomy is poised to expand exponentially with tremendous potential for economic development and job creation.

When farmers grow crops, they store carbon (CO_2) from the atmosphere, and when agricultural feedstocks are used for food, fuel and fiber, CO_2 simply returns to the atmosphere in a natural biogenic cycle.

Because of the benefits of agriculture as a renewable and sustainable resource, "biogenic" CO_2 emissions from agricultural feedstocks are universally accepted as carbon neutral by policymakers and scientists, yet:

- EPA is ignoring science and treating biogenic CO_2 emissions from farm products a "harmful pollutant" the same as fossil fuels.
- Practically speaking, EPA is putting a pollution tax on farm products, which imposes $$$ millions of unnecessary costs on users of farm products (think bakeries, brewers and grain processors) and energy generators (for example, corn stover used for electricity).
- If farmers want to avoid EPA's pollution tax, EPA says it can dictate what "sustainable" farm practices can be used to produce food products or energy feedstocks, which will require tracking compliance of every bushel of corn, wheat, soy or cottonseed from its source.

Congress should stop EPA from ignoring science and blocking American agriculture and bioeconomy markets. Prompt relief is crucial, as development of the bioeconomy will not wait – if the U.S. does not move forward, other countries will dominate these markets.

Our Request:
Biogenic CO_2 emissions from the use or processing of agricultural crops should be recognized as *de minimis* or zero under the Clean Air Act; and

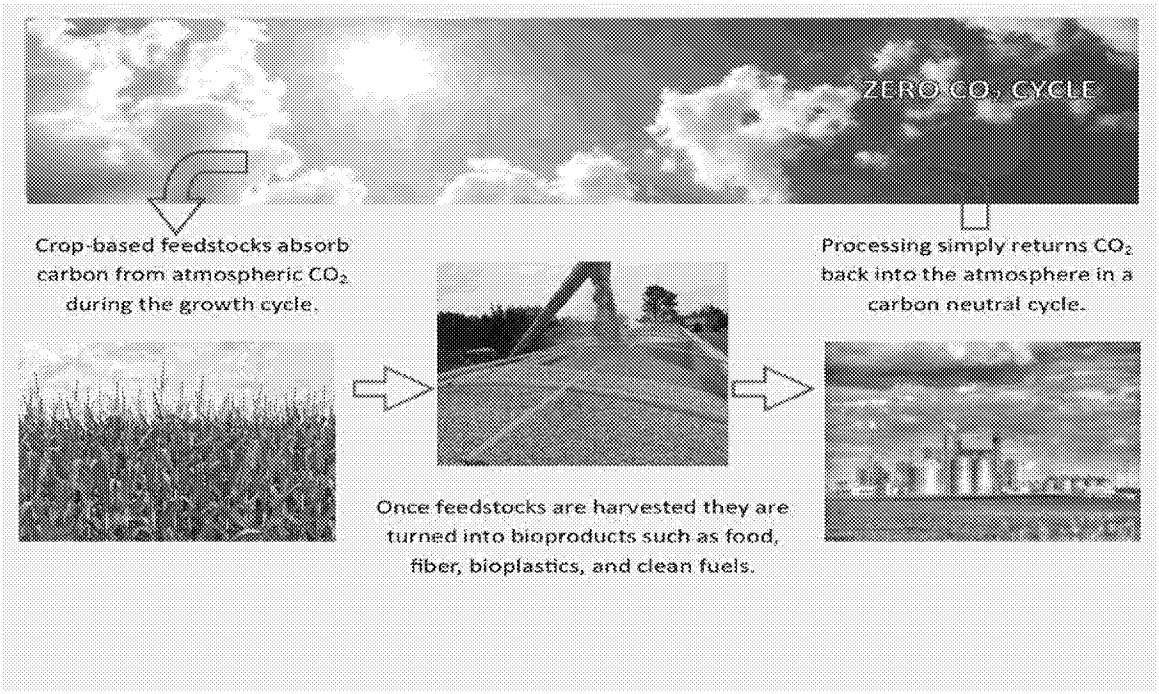
EPA should retract any attempt to regulate "sustainable" farming practices as a condition to feedstock eligibility under its Clean Power Plan (CPP) or Clean Air Act.

About the Biogenic CO_2 Coalition:

The Biogenic CO_2 Coalition, through its member national trade groups, represents a broad swath of agriculture and related sector constituents in advocating for sensible policies recognizing the carbon benefits of agricultural production and processing.

www.BiogenicCO2.org

Carbon Lifecycle of Agricultural Crops



American Bakers Association
www.americanbakers.org

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NATIONAL CORN GROWERS ASSOCIATION

National Cotton Council OF AMERICA

NCPA
National Cottonseed Products Association

NOPA
NATIONAL OILSEED PROCESSORS ASSOCIATION

North American Millers' Association
NAMA

www.BiogenicCO2.org

Message

From: John Fuher [JFuher@growthenergy.org]
Sent: 11/15/2017 4:15:51 PM
To: Sands, Jeffrey [sands.jeffrey@epa.gov]
Subject: Big things happening at Syngenta...

NASDA hires DeLucia for policy team

Aline DeLucia

The National Association of State Departments of Agriculture (NASDA) has hired Aline DeLucia as associate director for public policy.

Prior to joining NASDA, DeLucia served as a manager of federal government relations for Syngenta, where she was responsible for crop protection and biotechnology. DeLucia has three master's degrees in agricultural science and business from Indiana University, Purdue University, and the University of Florida. DeLucia received a bachelor of science in animal science from the University of Sao Paulo.

John Fuher | Senior Director of Government Affairs
Growth Energy
701 8th St NW Suite 450
Washington DC 20001
OFFICE Ex. 6 CELL Ex. 6
TWITTER @GrowthEnergy
FACEBOOK growthenergy.org/facebook
WEBSITE www.growthenergy.org

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Message

From: Daniel Botts [Daniel.Botts@ffva.com]
Sent: 2/15/2018 4:00:25 PM
To: Subramanian, Hema [Subramanian.Hema@epa.gov]
CC: Sands, Jeffrey [sands.jeffrey@epa.gov]
Subject: RE: Meetings on the 20th and 21st, MCFA Technical Committee and Water Monitoring Workshop, NAFTA TWG IWG Conference Call

Hema,

That's great. We are looking forward to an informal meet and greet and get to know you type session. There are several agenda items on our technical committee agenda that he may want to provide an indication of where they fit into the priorities he sees as EPA moves forward.

I will get a tentative list of Participants to you early next week.

Thanks,

Dan

Dan

FFVA

From: Subramanian, Hema [mailto:Subramanian.Hema@epa.gov]
Sent: Thursday, February 15, 2018 10:53 AM
To: Daniel Botts <Daniel.Botts@ffva.com>
Cc: Sands, Jeffrey <sands.jeffrey@epa.gov>
Subject: RE: Meetings on the 20th and 21st, MCFA Technical Committee and Water Monitoring Workshop, NAFTA TWG IWG Conference Call

Daniel,

I've confirmed Jeff can join you from 11:30-12:30 at your Minor Crop Farmers Alliance annual meeting next Wednesday, the 21st at the following address:

McDermott, Will & Emery
500 North Capitol Street, NW
Washington, DC

I am cc'ing Jeff here, so that you have his contact information and he can see our exchange. Will you want him to come prepared with formal remarks for the group, and if so, on any topics in particular? Or if it is more of an informal opportunity to meet with the group, that is fine as well. Just let us know if there are any other logistics/entrance procedures he should be aware of.

Thank you,
---Hema.

Hema Subramanian
Acting Special Assistant to the Senior Advisor for Agriculture

Office of the Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Phone (202) 564-5041
subramanian.hema@epa.gov

From: Daniel Botts [mailto:Daniel.Botts@ffva.com]
Sent: Thursday, February 15, 2018 10:35 AM
To: Subramanian, Hema <Subramanian.Hema@epa.gov>
Subject: RE: Meetings on the 20th and 21st, MCFA Technical Committee and Water Monitoring Workshop, NAFTA TWG IWG Conference Call

Hema,

I just got off the phone with our leadership group and would like to invite Jeff to meet with us at McDermott, Will and Emery. Our annual meeting will probably wrap up shortly after 11:00 so 11:30 until 12:30 would work for us. We will have lunch brought in, if that works for you, and if we run over a little it won't impact the work shop that starts at 1:30. I will let the MCFA Membership know about the opportunity to meet via email and will be able to provide a list of attendees from our side on Monday. I am anticipating a probable group of about 10 to 12 (it could possibly be a few more) if we have the meeting at MWE. If this doesn't work for you we would still plan to make the 11:30 to 12:30 time slot work at Federal Triangle.

Dan

FFVA

From: Subramanian, Hema [mailto:Subramanian.Hema@epa.gov]
Sent: Wednesday, February 14, 2018 4:48 PM
To: Daniel Botts <Daniel.Botts@ffva.com>
Subject: RE: Meetings on the 20th and 21st, MCFA Technical Committee and Water Monitoring Workshop, NAFTA TWG IWG Conference Call

I think the best option for Jeff will be Wednesday between 11:30-12:30. But could you clarify if that would be meeting here at the EPA office, or if it would it need to be a lunch? If it would be a lunch meeting, I can check whether Jeff would be able to meet you at your N. Capitol location or a restaurant.

Thank you,
---Hema.

Hema Subramanian
Acting Special Assistant to the Senior Advisor for Agriculture
Office of the Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Phone (202) 564-5041
subramanian.hema@epa.gov

From: Daniel Botts [mailto:Daniel.Botts@ffva.com]
Sent: Wednesday, February 14, 2018 4:33 PM
To: Subramanian, Hema <Subramanian.Hema@epa.gov>
Subject: RE: Meetings on the 20th and 21st, MCFA Technical Committee and Water Monitoring Workshop, NAFTA TWG IWG Conference Call

Hema, on Tuesday we can expand the lunch break to an hour from 30 minutes if he wanted to come over and meet with us then, on Wednesday – the meeting is scheduled from 9:30 until 11:30 but I don't think it will last the full two hours.. We could plan to meet Him at your location around 11:30 and that would give me at least an hour before I would have to head back over to MWE – the rest of the group (probably five to six people) could stay until closer to 1:00 pm. The OPP workshop in the afternoon is scheduled for 3 hours but I don't think it will last that long so we could probably meet any time after 4:00.

Dan

FFVA

From: Subramanian, Hema [mailto:Subramanian.Hema@epa.gov]
Sent: Wednesday, February 14, 2018 4:24 PM
To: Daniel Botts <Daniel.Botts@ffva.com>
Subject: RE: Meetings on the 20th and 21st, MCFA Technical Committee and Water Monitoring Workshop, NAFTA TWG IWG Conference Call

Thank you, Mr. Botts. Can you clarify the exact times and locations on each day to check with Jeff about? Sounds like you wouldn't have much time on Wednesday if you met at noon?
---Hema.

Hema Subramanian
Acting Special Assistant to the Senior Advisor for Agriculture
Office of the Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Phone (202) 564-5041
subramanian.hema@epa.gov

From: Daniel Botts [mailto:Daniel.Botts@ffva.com]
Sent: Wednesday, February 14, 2018 4:17 PM
To: Subramanian, Hema <Subramanian.Hema@epa.gov>
Subject: FW: Meetings on the 20th and 21st, MCFA Technical Committee and Water Monitoring Workshop, NAFTA TWG IWG Conference Call

Hema,

This is the email notification that went out last week to the MCFA Membership concerning the meetings Next week. As I mentioned, we would love to have Jeff come over during our lunch break for an informal meet and greet (he is welcome to stay for any of the meeting he would like). On Wednesday we have a two hour break around the noon hour if he would like for a smaller group to come to him. I will need to be back at McDermott, Will and Emery by 1:00 to prepare for the Workshop with OPP EFED.

It was great speaking with you and I look forward to hearing from the Smart Sectors group.

Dan

FFVA

From: Daniel Botts
Sent: Thursday, February 8, 2018 3:16 PM
To: Andy LaVigne <alavigne@amseed.org>; Barbara Madden <Madden@nwhort.org>; Ben Sacher (bsacher@wga.com) <bsacher@wga.com>; Carlene Price - California Citrus Quality Council (cprice@ccqc.org) <cprice@ccqc.org>; Chris Voigt <cvoigt@potatoes.com>; Craig Regelbrugge (CraigR@americanHort.org) <CraigR@americanHort.org>; Daniel Botts <Daniel.Botts@ffva.com>; Donn Zea (dzea@cdpb.org) <dzea@cdpb.org>; Edward Ruckert (E-mail) <eruckert@mwe.com>; Gabriele Ludwig <gludwig@almondboard.com>; Gary Obenauf (gobenauf@agresearchconsulting.com) <gobenauf@agresearchconsulting.com>; Gary Van Sickle (gary@specialtycrops.org) <gary@specialtycrops.org>; James R. Cranney - California Citrus Quallity Council (Jcranney@ccqc.org) <Jcranney@ccqc.org>; jdemarchi@amseed.org; Jill Calabro (jillc@americanhort.org) <jillc@americanhort.org>; Joe Bischoff (JBischoff@cgagroup.com) <JBischoff@cgagroup.com>; John Keeling (JOHNK@nationalpotatocouncil.org) <JOHNK@nationalpotatocouncil.org>; Julia Stewart (jstewart@prclarity.com) <jstewart@prclarity.com>; Kate Woods (woods@nwhort.org) <woods@nwhort.org>; Kathy Means (kmeans@pma.com) <kmeans@pma.com>; Lucy Nieves <Lucy.Nieves@ffva.com>; Marcy L. Martin (mmartin@cafreshfruit.com) <mmartin@cafreshfruit.com>; Mark Powers (powers@nwhort.org) <powers@nwhort.org>; Mark W. Seetin (mseetin@usapple.org) <mseetin@usapple.org>; Matt Harris (mharris@potatoes.com) <mharris@potatoes.com>; Matt McInerney (E-mail) <mmcinerney@wga.com>; Mike Aerts <Mike.Aerts@ffva.com>; Mike Willett (willett@treefruitresearch.com) <willett@treefruitresearch.com>; Nancy McBrady (nancy.mcbrady@maine.edu) <nancy.mcbrady@maine.edu>; Patrick Kole (patrick.kole@potato.idaho.gov) <patrick.kole@potato.idaho.gov>; Paul Schlegel (pauls@fb.org) <pauls@fb.org>; Peter Chaires <pchaires@flcitruspackers.org>; Philip Korson (E-mail) [Ex. 6]; Rob Neenam (rob@clfp.com) <rob@clfp.com>; Robert Ehn (E-mail) <robertehn@sbcglobal.net>; Robert L. Guenther (rguenther@unitedfresh.org) <rguenther@unitedfresh.org>; Terry Humfeld (thumfeld@cranberryinstitute.org) <thumfeld@cranberryinstitute.org>; Todd Scholz (tscholz@usapulses.org) <tscholz@usapulses.org>; Tom Bellamore (E-mail) <tbellamore@avocado.org>
Cc: Alan R. Ayers <alan.ayers@bayer.com>; Alexander Domesle <alexander.domesle@ars.usda.gov>; Aline DeLucia (aline@Nasda.org) <aline@Nasda.org>; Allen Scarborough <allen.scarborough@bayer.com>; Barbara Glenn <barb@nasda.org>; Beau Greenwood <bgreenwood@croplifeamerica.org>; Burleson Smith [Ex. 6]; [Ex. 6]; Cindy Baker-Smith <csmith@gowanco.com>; Dan Campbell <dan.campbell@syngenta.com>; Daniel L. Kunkel <kunkel@aesop.rutgers.edu>; David L. Epstein <david.epstein@ars.usda.gov>; Diana Haynes <diana.haynes@ams.usda.gov>; Elizabeth Hill <elizabeth.hill2@ars.usda.gov>; Eric@nsgovstrat.com; Fay, Dan <Dan.Fay@valent.com>; Harold Browning <hwbr@citrusrdf.org>; Heidi B. Irrig <heidi.irrig@syngenta.com>; Iain D. Kelly <iain.kelly@bayer.com>; Janis McFarland <janis.mcfarland@syngenta.com>; Jeff Case <JCase@croplifeamerica.org>; Jerry Baron <jbaron@aesop.rutgers.edu>; Jill Schroeder <jill.schroeder@ars.usda.gov>; John G. Cummings Ph. D. <john_cummings@fmc.com>; John Kran <jkran@michfb.com>; Joseph Starr <joseph.starr@pepsico.com>; Juli Jessen <jljessen@gowanco.com>; Julie Chao <julie.chao@fas.usda.gov>; Julius Fajardo <julius.fajardo@ars.usda.gov>; Laura McConnell <laura.mcconnell@bayer.com>; Lori Berger <lori@agbusinessresources.com>; Mark A. Rasmussen <Mark.Rasmussen@FAS.USDA.GOV>; Mark Maslyn [Ex. 6]; Matt Lantz <matthewl@bryantchristie.com>; Maximilian A. Merrill <mmerrill@lawbc.com>; Ray S. McAllister <rmcallister@croplifeamerica.org>; [Ex. 6]; Ronald Williams <ronaldwilliams@coca-cola.com>; Scott Rawlins <srawlins@wilburellis.com>; Sheryl H. Kunickis - USDA (sheryl.kunickis@osec.usda.gov) <sheryl.kunickis@osec.usda.gov>; Smith, Jeffrey <Jeffrey.Smith@valent.com>; Steven Bradbury <steve@spbradbury.com>; Teung Chin <Teung.Chin@ARS.USDA.GOV>

Subject: Meetings on the 20th and 21st, MCFA Technical Committee and Water Monitoring Workshop, NAFTA TWG IWG Conference Call

To All:

Please find attached the agendas for the MCFA technical Committee meeting and the MCFA/OPP Workshop on the Use of Monitoring Data in Pesticide Reevaluation. The time and location of the meetings are shown on the agenda. We will have teleconferencing available at both meetings. If plan to attend the Work Shop via teleconference please let me know by return email so I can send the presentations to you prior to the WS (around 1:00 pm on the 21st).

In addition, we will have a short conference call with the NAFTA TWG Industry Working Group at 5:00 pm following the technical committee meeting. For MCFA Members participating at the technical meeting I have arranged to use a smaller conference room at MWE to facilitate our groups participation. The agenda provided by Crop Life America for that meeting is also attached.

I have started a list of in person attendees at the meeting for MWE use in checking in people on the 20th and 21st, If you are planning to participate in person please let me know so I can provide the list to McDermott, Will and Emery , I will need this by COB on Monday February 19.

I look forward to seeing everyone on the 20th and 21st.

Dan

Daniel A. Botts

Vice President Industry Resources
Florida Fruit & Vegetable Association

Mailing Address:

P. O. Box 948153
Maitland, Florida 32794-8153

Street Address:

800 Trafalgar Court, Suite 200
Maitland, Florida 32751

Contact Information:

FFVA Main Number: (321) 214-5200
Direct Line: Ex. 6
Cell Phone: Ex. 6
Email Address: daniel.botts@ffva.com

Message

From: Subramanian, Hema [Subramanian.Hema@epa.gov]
Sent: 1/22/2018 1:31:07 PM
To: Scott Yager [syager@beef.org]; mhart@beef.org
CC: Sands, Jeffrey [sands.jeffrey@epa.gov]
Subject: FW: Jeff Sands bio
Attachments: Jeff Sands BIO.DOCX

Scott and Mary-Thomas,

Attached is Jeff Sands' bio for the Cattle Expo. I will send mine over today (need to update it).

Thank you,
---Hema.

Hema Subramanian
Special Assistant to the Senior Advisor for Agriculture (detail)
Office of the Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Phone (202) 564-5041
subramanian.hema@epa.gov

Jeff Sands is the Senior Advisor to the Administrator for Agriculture at the Environmental Protection Agency. Jeff comes to EPA most recently from Syngenta, where he served as Manager of Federal Government and Industry Relations. Before working at Syngenta, Sands was director of public policy for the Agricultural Retailers Association from 2012 to 2015. Jeff also has Capitol Hill experience, having helped handle agricultural issues as an aide to Rep. Tom Marino (R-Pa.).

Sands has a master's degree in public administration as well as a bachelor's degree in organizational communication from Valdosta State University. He also has a degree in environmental horticulture from Abraham Baldwin Agricultural College.

Message

From: Subramanian, Hema [Subramanian.Hema@epa.gov]
Sent: 3/23/2018 8:45:36 PM
To: Mortensen, Ginah [mortensen.ginah@epa.gov]; Heinemann, Kristina [Heinemann.Kristina@epa.gov]; Shenk, Kelly [shenk.kelly@epa.gov]; Peak, Nicholas [Peak.Nicholas@epa.gov]; Galloway, Carol [Galloway.Carol@epa.gov]; Dunkins, Robin [Dunkins.Robin@epa.gov]; Pierce, Troy [Pierce.Troy@epa.gov]; Anderson-Carnahan, Linda [Anderson-Carnahan.Linda@epa.gov]; Winn, G. Dean [winn.gerald@epa.gov]; Carbone, Chad [Carbone.Chad@epa.gov]; Edmondson, Lucy [Edmondson.Lucy@epa.gov]; Perrin, Rebecca [Perrin.Rebecca@epa.gov]; Segall, Martha [Segall.Martha@epa.gov]; Ziobro, Joseph [Ziobro.Joseph@epa.gov]; Rea, Anne [Rea.Anne@epa.gov]; Larsen, Erika [Larsen.Erika@epa.gov]; Rush, Randall [Rush.Randall@epa.gov]; Swackhammer, J-Troy [Swackhammer.J-Troy@epa.gov]; Flahive, Katie [Flahive.Katie@epa.gov]; Winnett, Steven [winnett.steven@epa.gov]; Robertson, Duane [Robertson.Duane@epa.gov]; Sands, Jeffrey [sands.jeffrey@epa.gov]; Sharpe, Kristinn [Sharpe.Kristinn@epa.gov]; Yin, Christina [Yin.Christina@epa.gov]; Miller, Amy [Miller.Amy@epa.gov]; Flournoy, Karen [Flournoy.Karen@epa.gov]
CC: Culver, Edison [culver.edison@epa.gov]; Nitsch, Chad [Nitsch.Chad@epa.gov]; Gill, Sonam [Gill.Sonam@epa.gov]; Brennan, Ross [Brennan.Ross@epa.gov]; Mitschele, Becky [Mitschele.Becky@epa.gov]; Staniec, Carol [staniec.carol@epa.gov]; Horak, David [horak.david@epa.gov]; Thilsted, Eugene [Thilsted.Eugene@epa.gov]
Subject: RE: more on Omni
Attachments: Omnibus 2018 - Ag.docx; EPA Report FY 2018 Omnibus.pdf; EPA Sections of FY 2018 Omnibus.pdf

Hello all,

After combing through several OCIR summaries and cross-checking spots of the full omnibus text to clarify confusing rumors/paraphrasing, I've put together the attached compilation of provisions that are potentially ag-related. It draws/copies from many summaries others have sent around, and includes some of my own notes. It's rough and quick, so be mindful of forwarding it on, but hopefully it's helpful to you.

Also attached are the main EPA sections of the bill (Division G Title II) and explanatory report. But the provisions in the attached summary also draws from Divisions M and S. The full bill text is at:
http://docs.house.gov/billsthisweek/20180319/BILLS-115SAHR1625-RCP115-66.pdf

To clarify, prohibition of NPDES regulation of pesticide discharges <u>was not</u> included, there were just some confusing summaries being circulated.

Thanks all,
---Hema.

Hema Subramanian
Acting Special Assistant for Agriculture Policy
Office of the Administrator
U.S. Environmental Protection Agency
Washington, DC
office: (202) 564-5041

EPA Sections of FY 2018 Omnibu...

Omnibus 2018 - Ag.docx

EPA Report FY 2018 Omnibus.pdf

From: Subramanian, Hema
Sent: Thursday, March 22, 2018 3:17 PM
To: Mortensen, Ginah <mortensen.ginah@epa.gov>; 'Heinemann, Kristina' <Heinemann.Kristina@epa.gov>; 'Shenk, Kelly' <shenk.kelly@epa.gov>; 'Peak, Nicholas' <Peak.Nicholas@epa.gov>; 'Galloway, Carol' <Galloway.Carol@epa.gov>; 'Dunkins, Robin' <Dunkins.Robin@epa.gov>; 'Pierce, Troy' <Pierce.Troy@epa.gov>; 'Anderson-Carnahan, Linda' <Anderson-Carnahan.Linda@epa.gov>; 'Winn, G. Dean' <winn.gerald@epa.gov>; 'Carbone, Chad' <Carbone.Chad@epa.gov>; 'Edmondson, Lucy' <Edmondson.Lucy@epa.gov>; 'Perrin, Rebecca' <Perrin.Rebecca@epa.gov>; 'Segall, Martha' <Segall.Martha@epa.gov>; 'Ziobro, Joseph' <Ziobro.Joseph@epa.gov>; 'Rea, Anne' <Rea.Anne@epa.gov>; 'Larsen, Erika' <Larsen.Erika@epa.gov>; 'Rush, Randall' <Rush.Randall@epa.gov>; 'Swackhammer, J-Troy' <Swackhammer.J-Troy@epa.gov>; 'Flahive, Katie' <Flahive.Katie@epa.gov>; 'Winnett, Steven' <winnett.steven@epa.gov>; 'Robertson, Duane' <Robertson.Duane@epa.gov>; 'Sands, Jeffrey' <sands.jeffrey@epa.gov>; 'Sharpe, Kristinn' <Sharpe.Kristinn@epa.gov>; 'Yin, Christina' <Yin.Christina@epa.gov>; 'Miller, Amy' <Miller.Amy@epa.gov>; Flournoy, Karen <Flournoy.Karen@epa.gov>
Cc: 'Culver, Edison' <culver.edison@epa.gov>; 'Nitsch, Chad' <Nitsch.Chad@epa.gov>; 'Gill, Sonam' <Gill.Sonam@epa.gov>; 'Brennan, Ross' <Brennan.Ross@epa.gov>; 'Mitschele, Becky' <Mitschele.Becky@epa.gov>; 'Staniec, Carol' <staniec.carol@epa.gov>; 'Horak, David' <horak.david@epa.gov>
Subject: more on Omni

All,

I'd like to clarify that the Omnibus draft does not appear to include a prohibition on EPA for enforcing the Chesapeake Bay TMDL.

There were some items in OCIR's summary of the bill that I have not been able to confirm with my own look at the bill. They mentioned this was included, but I haven't been able to find it:

"Prohibiting EPA from requiring Clean Water Act permits for certain agricultural practices, consistent with current law."

So, for now, I'm not sure that PGP language was included.

I have confirmed the following language was in the bill:

- CERCLA exemption
- PRIA 3 extension
- Prohibition of regulating certain emissions from livestock under CAA
- Prohibition of requiring GHG reporting
- Prohibition of requiring permits for dredge or fill material under CWA

I'm not going to forward the OCIR summary in the interest of making sure it's accurate, and I'm checking a few items with them and will get back to you once I hear further. .

For those on Ginah's call, unfortunately I'll have to hop off shortly. But anyone who'd like to touch base, feel free to call me tomorrow or next week, my schedule will be a lot more mellow.

Thanks all,
---Hema.

Hema Subramanian
Acting Special Assistant for Agriculture Policy
Office of the Administrator
U.S. Environmental Protection Agency
Washington, DC
office: (202) 564-5041

From: Subramanian, Hema
Sent: Thursday, March 22, 2018 2:51 PM
To: Mortensen, Ginah <mortensen.ginah@epa.gov>; Heinemann, Kristina <Heinemann.Kristina@epa.gov>; Shenk, Kelly <shenk.kelly@epa.gov>; Peak, Nicholas <Peak.Nicholas@epa.gov>; Galloway, Carol <Galloway.Carol@epa.gov>; Dunkins, Robin <Dunkins.Robin@epa.gov>; Pierce, Troy <Pierce.Troy@epa.gov>; Anderson-Carnahan, Linda <Anderson-Carnahan.Linda@epa.gov>; Winn, G. Dean <winn.gerald@epa.gov>; Carbone, Chad <Carbone.Chad@epa.gov>; Edmondson, Lucy <Edmondson.Lucy@epa.gov>; Perrin, Rebecca <Perrin.Rebecca@epa.gov>; Segall, Martha <Segall.Martha@epa.gov>; Ziobro, Joseph <Ziobro.Joseph@epa.gov>; Rea, Anne <Rea.Anne@epa.gov>; Larsen, Erika <Larsen.Erika@epa.gov>; Rush, Randall <Rush.Randall@epa.gov>; Swackhammer, J-Troy <Swackhammer.J-Troy@epa.gov>; Flahive, Katie <Flahive.Katie@epa.gov>; Winnett, Steven <winnett.steven@epa.gov>; Robertson, Duane <Robertson.Duane@epa.gov>; Sands, Jeffrey <sands.jeffrey@epa.gov>; Sharpe, Kristinn <Sharpe.Kristinn@epa.gov>; Yin, Christina <Yin.Christina@epa.gov>; Miller, Amy <Miller.Amy@epa.gov>; Flournoy, Karen <Flournoy.Karen@epa.gov>
Cc: Culver, Edison <culver.edison@epa.gov>; Nitsch, Chad <Nitsch.Chad@epa.gov>; Gill, Sonam <Gill.Sonam@epa.gov>; Brennan, Ross <Brennan.Ross@epa.gov>; Mitschele, Becky <Mitschele.Becky@epa.gov>; Staniec, Carol <staniec.carol@epa.gov>; Horak, David <horak.david@epa.gov>
Subject: RE: Weekly call with the Ag Counselor's Office; Mondays, 3- 3:30pm ET; Call-in Ex. 6 access code Ex. 6 (there is no area code)

Link to omni draft:
http://docs.house.gov/billsthisweek/20180319/BILLS-115SAHR1625-RCP115-66.pdf

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Hema Subramanian
Acting Special Assistant for Agriculture Policy
Office of the Administrator
U.S. Environmental Protection Agency
Washington, DC
office: (202) 564-5041

TITLE II – ENVIRONMENTAL PROTECTION AGENCY

The bill provides $8,058,488,000 for the Environmental Protection Agency (EPA). The bill does not support reductions proposed in the budget request unless explicitly noted in the explanatory statement.

Congressional Budget Justification.—The Agency is directed to continue to include the information requested in House Report 112-331 and any proposals to change State allocation formulas that affect the distribution of appropriated funds in future budget justifications.

Reprogramming and Workforce Reshaping.—The agreement does not include any of the requested funds for workforce reshaping. Further, the Committees do not expect the Agency to consolidate or close any regional offices in fiscal year 2018. The Agency is held to the reprogramming limitation of $1,000,000 and should continue to follow the reprogramming directives as provided in the front of this explanatory statement. It is noted that such reprogramming directives apply to proposed reorganizations, workforce restructure, reshaping, transfer of functions, or downsizing, especially those of significant national or regional importance, and include closures, consolidations, and relocations of offices, facilities, and laboratories.

Further, the Agency may not use any amount of deobligated funds to initiate a new program, office, or initiative, without the prior approval of the Committees. Within 30 days of enactment of this Act, the Agency is directed to submit to the House and Senate Committees on Appropriations its annual operating plan for fiscal year 2018, which shall detail how the Agency plans to allocate funds at the program project level.

Other.—It is noted that the current workforce is below the fiscal year 2017 level, therefore, the agreement includes rescissions in the Science and Technology and Environmental Programs and Management accounts that capture expected savings associated with such changes. The Agency is directed to first apply the rescissions across program project areas to reflect routine attrition that will occur in those program project areas in fiscal year 2018 and then to reflect efficiency savings in a manner that seeks, to the extent practicable, to be proportional among program project areas. Amounts provided in this Act are sufficient to fully fund Agency payroll estimates. The Committees understand that the Agency routinely makes funding payroll requirements a top priority, and the Committees expect the Agency will continue to do so as it executes its fiscal year 2018 appropriation and applies the rescissions.

The Committees do not expect the Agency will undertake adverse personnel actions or incentive programs to comply with the rescissions nor do the Committees expect the Agency will undertake large-scale adverse personnel actions or incentive programs in fiscal year 2018. As specified in the bill language, the rescissions shall not apply to the Geographic Programs, the National Estuary Program, and the National Priorities funding in the Science and Technology and Environmental Programs and

Management accounts. The Agency is directed to submit, as part of the operating plan, detail on the application of such rescissions at the program project level.

SCIENCE AND TECHNOLOGY
(INCLUDING RESCISSION OF FUNDS)

For Science and Technology programs, the bill provides $713,823,000 to be partially offset by a $7,350,000 rescission for a net discretionary appropriation of $706,473,000. The bill transfers $15,496,000 from the Hazardous Substance Superfund account to this account. The bill provides the following specific funding levels and direction:

Indoor Air and Radiation —The bill provides $5,997,000 and funding for the radon program is maintained at not less than the fiscal year 2017 enacted level.

Research: National Priorities.—The bill provides $4,100,000 which shall be used for extramural research grants, independent of the Science to Achieve Results (STAR) grant program, to fund high-priority water quality and availability research by not-for-profit organizations who often partner with the Agency. Because these grants are independent of the STAR grant program, the Agency should strive to award grants in as large an amount as is possible to achieve the most scientifically significant research. Funds shall be awarded competitively with priority given to partners proposing research of national scope and who provide a 25 percent match. The Agency is directed to allocate funds to grantees within 180 days of enactment of this Act.

Additional Guidance.—The agreement includes the following additional guidance:

Alternatives Testing.—The Agency is directed to follow the guidance contained under this heading in House Report 115-238 and to also include in its report to the Committees information and analysis related to potential barriers or limitations on the use of alternative test methods and to ensure that any future plans address such barriers or limitations, particularly as they relate to susceptible populations.

Computational Toxicology.—The Committees support the Agency's computational toxicology research activities to advance the next generation of risk assessment methods, including for prioritization, screening and testing under the Lautenberg Chemical Safety Act (LCSA). Such research activities must be carried out following the requirements of the LCSA to ensure that alternative test methods "provide information of equivalent or better scientific quality and relevance" and to protect susceptible subpopulations from unreasonable risk. The Agency's National Center for Computational Toxicology (NCCT) is encouraged to expand its collaborations with scientific experts outside of the Agency to advance development and use of human biology-based experimental and computational approaches for chemical assessments.

The Committees direct the Agency to develop the strategic plan on alternative methods and testing strategies required by the LCSA utilizing the leadership of the Director of Office of Pollution Prevention and Toxics (OPPT), the Director of NCCT, the Director of the National Toxicology Program (NTP), and the Director of the National Center for Environmental Assessment (NCEA). The process for developing this strategic plan shall include requests for information from the scientific community and the public and two or more public meetings or workshops. The Agency shall circulate the draft strategic plan for public review and comment, revise the plan to address comments and then issue the strategic plan, which shall include an appendix documenting response to, and disposition of, public comments. In addition, NCCT, OPPT, NTP, and NCEA shall each assign 1 FTE to collaborate on evaluating computational toxicology, in vitro methods and alternative test methods for specific scientifically-valid applications by OPPT for implementation in the LCSA. The Committees request the Agency to provide a status report on these activities no later than September 30, 2018.

Enhanced Aquifer Use.—The Agency is directed to continue following the guidance contained in Senate Report 114-281 in addition to the guidance contained in House Report 115-238 directing the Agency to coordinate with other Federal research efforts in this area.

Integrated Risk Information System.—The agreement continues to provide funding for the Integrated Risk Information System (IRIS) program at the fiscal year 2017 enacted level and direction that the program continues within the Office of Research and Development. The Committees remain concerned that the program has appeared on the ~~General~~ Accountability Office's (GAO) High Risk List since 2008. The Committees are aware of progress made by the Agency to implement the 2011 National Academy of Science's (NAS) Chapter 7 and 2014 NAS report recommendations for the IRIS program, but remain concerned that the recommendations have not been fully implemented. The Committees note that the Agency and the NAS held a workshop in February 2018 to review advances made to the IRIS process, and that an NAS report on IRIS' progress is forthcoming. The Committees are encouraged that the program indicated its willingness to more closely align the development of risk assessments with stated regulatory priorities of the Agency, and believes that these efforts will make the assessments more relevant. The Committees understand that the program intends to continue the development of new methodologies and technologies to enhance the development of future IRIS assessments and encourages the program to do so, while also encouraging the program to ensure that all IRIS methodologies attain the highest scientific rigor. Finally, the Committees urge the expedited completion of the IRIS handbook and direct that the public be afforded an opportunity to provide comment on the handbook before it is placed in use.

(Government

National Air Toxics Trends Station Network.—The agreement maintains funding for the National Air Toxic Trends Station Network, which tracks air pollution trends at 27 stations across the country, at

the fiscal year 2017 enacted level to accommodate the network's ongoing activities to gather consistent, high-quality monitoring data on hazardous air pollutants across the country.

Nanomaterials Research.—The Agency should continue to follow the direction included in Senate Report 114-281 and seek to maximize collaborative research efforts with the Food and Drug Administration.

Partnership Research.—The Committees encourage the Agency to continue leveraged partnerships with not-for-profit institutions that often partner with the Agency, industry, and affected stakeholders to produce independent science and evaluate the effectiveness of environmental regulations relating to unconventional oil and gas development. The study should be used to provide credible science, of national scope, relating to unconventional oil and gas development. Within available funds, the Agency is directed to use ~~at least~~ $1,000,000 to partner on such a study during fiscal year 2018.

STAR Grants.—The agreement provides funds to continue the Science to Achieve Results (STAR) program and the Committees direct the Agency to distribute grants consistent with fiscal year 2017. Within 90 days of enactment of this Act, the Committees direct the Agency to provide a briefing on its plans for the program in fiscal year 2018.

ENVIRONMENTAL PROGRAMS AND MANAGEMENT
(INCLUDING RESCISSION OF FUNDS)

For Environmental Programs and Management, the bill provides $2,643,299,000 to be partially offset by a $45,300,000 rescission for a net discretionary appropriation of $2,597,999,000. The bill provides the following specific funding levels and direction:

Clean Air. —The agreement maintains funding for the EnergySTAR program at the fiscal year 2017 enacted level. In 2009, the Agency and the Department of Energy (DOE) signed a Memorandum of Understanding (MOU) related to the EnergySTAR Program, which shifted some functions related to home appliance products from the DOE to EPA. The Agency shall work with the DOE to review the 2009 MOU and report to the Committees within 90 days of enactment of this Act on whether the expected efficiencies for home appliance products have been achieved.

Further, the Committees do not support the proposed termination of voluntary programs, including Natural GasSTAR, AgSTAR, the Combined Heat and Power Partnership, and other partnership programs where EPA works collaboratively with nongovernmental entities to identify beneficial methods to reduce emissions, reduce pollution, or increase efficiency. The Committees also maintain both program areas related to stratospheric ozone at not less than the fiscal year 2017 enacted level.

Environmental Protection: National Priorities.—The bill provides $12,700,000 for a competitive grant program to provide technical assistance for improved water quality or safe drinking water, adequate waste water to small systems or individual private well owners. The Agency shall provide $10,000,000 for the Grassroots Rural and Small Community Water Systems Assistance Act, for activities specified under section 1442(e) of the Safe Drinking Water Act (42 U.S.C. 300j–1(e)(8)). The Agency is also directed to provide $1,700,000 for grants to qualified not-for-profit organizations for technical assistance for individual private well owners, with priority given to organizations that currently provide technical and educational assistance to individual private well owners. The Agency is directed to provide on a national and multi-State regional basis, $1,000,000 for grants to qualified organizations, for the sole purpose of providing onsite training and technical assistance for wastewater systems. The Agency shall require each grantee to provide a minimum 10 percent match, including in kind contributions. The Agency is directed to allocate funds to grantees within 180 days of enactment of this Act.

The Committees understand the Agency has made a decision to put out a multi-year Request for Applications for fiscal year 2017 and fiscal year 2018 without expressed approval from the Committees. The Committees expect the Agency to formally consult on similar decisions in the future.

Geographic Programs.—The bill provides $447,857,000, as distributed in the table at the end of this division, and includes the following direction:

Great Lakes Restoration Initiative.—The bill provides $300,000,000 and the Agency shall continue to follow the direction as provided in House Report 112-589 and in Senate Report 114-281 related to the Great Lakes Restoration Initiative. Additionally, the Committees encourage Agency funds for Great Lakes projects to be made available for projects in the historic Great Lakes Basin, which includes the Chicago River Watershed.

Chesapeake Bay.—The bill provides $73,000,000 and the Agency shall allocate funds consistent with the direction under this heading in Senate Report 114-281.

Gulf of Mexico.—The bill provides $12,542,000 for the Gulf of Mexico Geographic Program where hypoxia is a growing cause for concern. The Committees direct the Agency to coordinate with the U.S. Department of Agriculture, the Gulf States, and other State, local and private partners to leverage greater resources toward conservation projects on working-lands within the Gulf Region and Mississippi River Basin. The Agency is directed to distribute funds in the same manner as fiscal year 2017.

Lake Champlain.—The bill provides $8,399,000 for the Lake Champlain program. From within the amount provided, $4,399,000 shall be allocated in the same manner as fiscal year 2017 and $4,000,000 shall be for otherwise unmet needs necessary to implement the Agency's 2016 Phosphorus Total Maximum Daily Load Plan for Lake Champlain for projects and work identified in the State implementation plan.

Puget Sound.—The bill provides $28,000,000 and the Agency shall follow the direction under this heading in House Report 115-238.

Northwest Forest Program.—The Northwest Forest Program is funded at not less than the fiscal year 2017 enacted level.

South Florida Program.—The agreement maintains funding for the South Florida Program and directs the Agency to allocate funds in the same manner as fiscal year 2017.

Indoor Air and Radiation.—The agreement maintains funding for the radon program at the fiscal year 2017 enacted level and funds have been included for Radiation Protection and Reduce Risks from Indoor Air programs.

Information Exchange/Outreach.—The agreement includes funding for tribal capacity building equal to the fiscal year 2017 enacted level, and the Agency is directed to use environmental education funds for the smart skin care program, similar to prior years. The agreement also provides for the Small Minority Business Assistance program to be continued.

International Programs.—The bill provides $15,400,000 and includes funds to maintain the U.S.-Mexico Border program at the fiscal year 2017 enacted level.

Legal/Science/Regulatory/Economic Review.—The bill provides $111,414,000, equal to the fiscal year 2017 enacted level. Within that amount, Integrated Environmental Strategies is funded at the fiscal year 2017 level, so that the Agency can continue to provide locally-led, community-driven technical assistance to communities in partnership with localities, States, and other Federal agencies.

Official Reception and Representation Expenses.—The bill provides necessary funding for the Agency's Commission on Environmental Cooperation meeting in fiscal year 2018.

Resource Conservation and Recovery Act.—The bill provides $109,377,000. Of the funds provided under this section, $6,000,0000 should be allocated for the purpose of developing and implementing a Federal permit program for the regulation of coal combustion residuals in nonparticipating States, as authorized under section 4005(d)(2)(B) of the Solid Waste Disposal Act (42 U.S.C. 6945(d)(2)(B)). The Committees also reiterate the importance of additional language included in House Report 115-238 related to coal combustion residuals and recognize that additional State grants may be necessary as States work to implement permit programs as authorized under section 2301 of the WIIN Act (Public Law 114-322).

Additionally, the Committees continue to support the Waste Minimization and Recycling program, and the Agency is encouraged to use funds from within the program to help public entities demonstrate community anaerobic digester applications to municipal solid waste streams and farm needs such as capturing excess phosphorus.

Toxics Risk Review and Prevention.—The bill provides $92,521,000 and maintains funding for the Pollution Prevention program and the Lead Risk Reduction program.

Water: Ecosystems.—The bill provides $47,788,000. From within the amount provided, $26,723,000 has been provided for the National Estuary Program (NEP) grants as authorized by section 320 of the Clean Water Act. This amount is sufficient to provide each of the 28 national estuaries in the program with a grant of at least $600,000.

Further, in the Administrative Provisions section, the Committees direct that $1,000,000 in competitive grants be made available for additional projects, and encourages the Agency to work in consultation with the NEP directors to identify worthy projects and activities.

Water Quality Protection. —The bill provides $210,417,000 and maintains funding for the WaterSENSE program at the fiscal year 2017 enacted level.

Additional Guidance.—The agreement includes the following additional guidance:

Chesapeake Bay.—The Committees note the agreements signed by the Agency, States and other stakeholders to locate a Chesapeake Bay Liaison Office in Annapolis, Maryland to facilitate coordination among jurisdictions and from participating Federal agencies in support of the Chesapeake Bay Program. Currently, the Chesapeake Bay Program Office is located in Annapolis, per the agreement, and houses staff from the Chesapeake Bay Program, five Federal agencies and 35 non-Federal partners in order to facilitate program coordination. The Committees note and appreciate the commitment made by the Agency to locate the office in, or immediately adjacent to, Annapolis, in compliance with the signed agreements and to also ensure that the future office space will continue to accommodate all of the current Chesapeake Bay Program Office participants. The Committees direct the Agency to completely fulfill those commitments and to keep the Committees fully apprised of progress in each step of the lease process.

Coal Refuse-Fired Electrical Generating Units.—In its rulemaking on New Source Performance Standards (NSPS), the Agency provided a separate subcategory for SO2 emissions standards for owners and operators of affected coal refuse-fired facilities combusting 75 percent or more coal refuse on an annual basis. In the subsequent rulemaking, "National Emission Standards for Hazardous Air Pollutants from Coal- and Oil-Fired Electric Utility Steam Generating Units," (the MATS rule) the Agency did not provide a separate subcategory for coal refuse-fired Electric Generating Units (EGUs). It is noted that some stakeholders believe that the NSPS standard appropriately recognizes the multimedia environmental benefits provided by coal refuse-fired EGUs and that the high sulfur content present in coal refuse presents economic and technical difficulties in achieving the same acid gas standards as for coal. The Agency should consider revising the MATS Rule as soon as practicable to provide a separate category for

coal refuse-fired EGUs for purposes of the acid gas requirement and its SO2 surrogate consistent with the NSPS.

Diesel Generators in Remote Alaska Villages.—Under 40 CFR 60.4216, diesel generators purchased after Model Year 2014 are required to have a diesel particulate filter if they are used as the primary power generator. The Committees understand that these filters have a high failure rate in harsh weather conditions and that repair of the filters can be difficult and expensive. The Committees direct the Agency to reexamine 40 CFR 60.4216 and consider exempting these Villages from the diesel particulate filter requirement.

Ecolabels for Federal Procurement.—Multiple forest certification systems have been recognized throughout the Federal government as supporting the use of sustainable products in building construction and other uses. The Committees are concerned that the Agency's efforts have not acknowledged many of these certification systems and are therefore limiting the procurement of some products that may be sustainable. The Committees understand that the Agency's Wood/Lumber product category recommendation is currently under review. The Committees direct the Agency to align its Wood/Lumber recommendation with the provisions of the USDA BioPreferred program.

Elk River.—The Committees encourage the Agency, in coordination with the Department of State and other Federal agencies, to work with State, local, and Tribal partners on efforts to reduce selenium, sulfates, nitrates and other harmful contaminants in the Kootenai Watershed, to which the Elk River is a tributary. The Agency is directed to brief the Committees on its efforts within 180 days of enactment of this Act.

Exempt Aquifers.—The Agency shall follow the guidance contained under this heading in House Report 115-238.

Fish Grinding.—Under a Clean Water Act general permit, onshore seafood processors in Alaska are allowed to grind and discharge ~~of~~ seafood waste. The permit requires that all seafood waste be ground to a size of no more than one-half inch in any dimension. Unfortunately, in some instances, the best available technology is unable to achieve a half inch grind dimension on a consistent basis due to the malleable nature of fish waste. The Agency should develop a policy to ensure that fish processors using the best available technology and/or best conventional practice will be considered in compliance. Additionally, processing vessels operating in waters off-shore of Alaska are subject to the same one-half inch grinding requirement even though there are no documented water quality issues that require such grinding. The Agency should exempt offshore processing vessels from the requirement.

Glider Kits.—The Committees understand the Agency has announced plans to revisit portions of its Phase 2 Greenhouse Gas (GHG) Emissions and Fuel Efficiency Standards for Medium- and Heavy-

Duty Engines. Upon completion of the review, the Agency is directed to update the Committees on the matter.

Integrated Planning.—The Agency is encouraged to continue using an integrated planning approach to enhance flexibility for communities struggling to meet compliance costs mandated under the Clean Water Act (CWA) as well as the Agency's efforts to consider a community's ability to pay for compliance costs when determining permitting actions under the CWA. The Agency is directed to maintain technical assistance and outreach to communities seeking to develop and implement an integrated planning approach to meeting Clean Water Act requirements. Further, the Committees urge the Agency to implement integrated planning measures through a flexible permit process rather than enforcement actions and consent decrees.

Interagency Consultations.—The Agency is directed to continue following the requirements in Senate Report 114-281 regarding consultation with the Secretary of Agriculture related to the Federal Insecticide, Fungicide, and Rodenticide Act.

Pesticides Registration Improvement Act.—The agreement provides additional funding for compliance with the Pesticides Registration Improvement Act. The Committees direct the Agency to comply with the fiscal year 2017 quarterly reporting requirement related to previously collected maintenance fees that are currently unavailable for obligation. To ensure the Committees have the most accurate information regarding this issue, the Agency is directed to provide a briefing within 30 days of enactment of this Act.

Public Access to Research.—The Agency released its Plan to Increase Access to Results of EPA–Funded Scientific Research on November 29, 2016. The Committees urge the Agency to continue its efforts towards full implementation of the plan, and directs the Agency to provide an update on its efforts within 60 days of enactment of this Act.

Regulation of Groundwater.—Since enactment in 1972, the Clean Water Act (CWA) has regulated impacts to navigable waters, while regulation of groundwater has remained outside of the Act's jurisdiction. Instead, legislative history surrounding the CWA indicates that Congress intended for groundwater pollution to be regulated through CWA's nonpoint source programs and other Federal and State laws. For example, releases into groundwater from solid waste units are regulated at a Federal level by the Resource Conservation and Recovery Act (RCRA). Recently, some courts have imposed a broad view of CWA liability based on a theory of hydrological connection between groundwater and surface water. Other courts have taken a more narrow view and have focused on statutory distinctions between surface water and groundwater. The Committees are aware that the Agency has requested comment on its previous statements "regarding the Clean Water Act (CWA) and whether pollutant discharges from point sources that reach jurisdictional surface waters via groundwater or other subsurface flow that has a

direct hydrologic connection to the jurisdictional surface water may be subject to CWA regulation." After completing the public comment process, the Committees encourage the Agency to consider whether it is appropriate to promulgate a rule to clarify that groundwater releases from solid waste units are regulated under RCRA and are not considered point sources, and, that releases of pollutants through groundwater are not subject to regulation as point sources under the CWA. The Agency is directed to brief the Committees about its findings and any plans for future rulemaking.

Small Refinery Relief.—The Committees continue the directive contained in Senate Report 114–281 related to small refinery relief. The Agency is reminded that, regardless of the Department of Energy's recommendation, additional relief may be granted if the Agency believes it is warranted.

Toxic Substances Control Act (TSCA) Risk Evaluations.—Under the agreement, the Agency is directed to implement the Frank R. Lautenberg Chemical Safety for the 21st Century Act in a manner that reflects the best available science as now required under TSCA section 26.

Agricultural Operations.—The Committees note that Congress never intended the Solid Waste Disposal Act to govern animal or crop waste, manure, or fertilizer, or constituents derived from such sources. The Agency's longstanding regulations accurately reflect Congress' intent not to regulate manure and crop residues under the Solid Waste Disposal Act, and the Committees support legislative efforts to clarify and codify the treatment of agricultural byproducts under the Solid Waste Disposal Act.

HAZARDOUS WASTE ELECTRONIC MANIFEST SYSTEM FUND

The bill provides $3,674,000 which is expected to be fully offset by fees for a net appropriation of $0. The Committees continue to support the expeditious development of a system that would allow for the electronic tracking of hazardous waste shipments pursuant to Public Law 112–195.

The Committees realize the Agency is transitioning from the developmental phase to the implementation phase for the E-Manifest System. Therefore, the Committees urge the Agency to use an adequate portion of funding to begin the implementation of the Application Program Interface System which will allow hazardous waste treatment, storage, transport and disposal facilities to interface their computer systems with those of EPA to upload and download manifest and other important information related to full scale implementation of the system.

OFFICE OF INSPECTOR GENERAL

The bill provides $41,489,000 for the Office of Inspector General.

BUILDINGS AND FACILITIES

The bill provides $34,467,000 for Buildings and Facilities.

HAZARDOUS SUBSTANCE SUPERFUND
(INCLUDING TRANSFERS OF FUNDS)

The bill provides $1,091,947,000 for the Hazardous Substance Superfund account and includes bill language to transfer $8,778,000 to the Office of Inspector General account and $15,496,000 to the Science and Technology account. When combined with an additional $54,389,000 for the Superfund Remedial program and an additional $8,611,000 for the Superfund Emergency Response and Removal program in a general provision in Title IV, the bill provides a total of $1,154,947,000 for the Hazardous Substance Superfund. The bill provides the following additional direction:

Enforcement.—The agreement provides $166,375,000 for Superfund enforcement, equal to the fiscal year 2017 enacted level. The Committees do not concur with the proposed elimination of financial support to the Department of Justice (DOJ). The Agency is directed to continue financial support of the DOJ in fiscal year 2018 at a level that will ensure the DOJ can continue to initiate and prosecute civil, judicial, and administrative site remediation cases and ensure that responsible parties perform cleanup actions at sites where they are liable.

Additional Guidance.—The Committees have provided the following additional guidance with respect to funding provided under this account:

Baseline Testing Study.—The Committees direct the Agency to work with the Municipality of Vieques to partner with a University-led coalition, which shall include a School of Public Health, to conduct research to facilitate the effective testing, evaluation, quantification and mitigation of the toxic substances in the soil, seas, plant, animal and human population of Vieques. This effort will fill an information void at this site, which functioned as a military training installation for decades, and serve as the baseline study for all potential future mitigation efforts.

Contaminants of Emerging Concern.—The bill provides $181,306,000 in base funds for Emergency Response and Removal activities. When combined with an additional $8,611,000 in a general provision in Title IV, the bill provides a total of $189,917,000 for Emergency Response and Removal activities. These activities should include collaborative work with State, Tribal, and local governments to help communities address contaminants of emerging concern. Furthermore, the Committees recommend that the Agency expeditiously remediate Superfund sites contaminated by these emerging contaminants, and provide technical assistance and support to States and Tribes during the remedial cleanup process.

Financial Assurance.—Since enactment of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) in 1980, Federal agencies like the Bureau of Land Management and Forest Service have created and updated financial assurance requirements for reclamation and closure of hardrock mining facilities on Federal lands. Similarly, several States have developed financial assurance programs for mining activities occurring on private and State lands. The Committees understand that, pursuant to a Federal Register notice signed on December 11, 2017, the EPA will not impose new Federal financial assurance requirements on hardrock mining facilities.

Sediment Guidance.—When implementing the recommendations of the Superfund Task Force, the Agency should consider additional improvements to the consistency of the application of sediment guidance among regions. At sites expected to exceed $50,000,000, the Committees encourage the Agency to include the Contaminated Sediment Technical Advisory Committee (CSTAG) and the National Remedy Review Board (NRRB) throughout the process and to ensure that their technical review and remedy recommendations are evaluated and considered for inclusion in the final remedy. Additionally, the Committees encourage the Agency to, consistent with National Oil and Hazardous Substances Contingency Plan, set achievable cleanup goals, broaden the use of adaptive management and early actions, explore the utility of public-private partnerships similar, expand stakeholder participation, and promote cost-effectiveness, redevelopment, and sustainability in the Superfund process.

Tribal Guidance.—The Committees recognize the importance of government-to-government Tribal consultation as well as the necessity to honor Tribal treaty rights and resources protected by

treaties. The Agency is directed to fully implement the Agency's Guidance for Discussing Tribal Treaty Rights to ensure Agency actions adequately consider treaty rights proactively throughout the consultation process.

LEAKING UNDERGROUND STORAGE TANK TRUST FUND PROGRAM

The bill provides $91,941,000 for the Leaking Underground Storage Tank Trust Fund Program.

INLAND OIL SPILL PROGRAMS

The bill provides $18,209,000 for Inland Oil Spill Programs.

STATE AND TRIBAL ASSISTANCE GRANTS

The bill provides $3,562,161,000 for the State and Tribal Assistance Grants program and includes the following specific funding levels and direction:

Infrastructure Assistance.—The bill provides $2,486,120,000 in base funds for infrastructure assistance. When combined with an additional $650,000,000 in a Title IV general provision, the bill provides a total of $3,136,120,000 for infrastructure assistance. The amount provided increases funding for the State Revolving Loan Funds $600,000,000 above the fiscal year 2017 enacted level. The

agreement includes a total of $1,693,887,000 for the Clean Water State Revolving Loan Fund and $1,163,233,000 for the Drinking Water State Revolving Loan Fund.

Assistance to Small and Disadvantaged Communities.—Within a Title IV general provision, the bill provides $20,000,000 to begin a grant program to help small and disadvantaged communities develop and maintain adequate water infrastructure. The program was created in section 2104 of Public Law 114–322. The Agency is directed to brief the Committees prior to publishing its request for applications related to this new grant program.

Reducing Lead in Drinking Water.—Within a Title IV general provision, the bill provides $10,000,000 to begin a grant program, created in section 2105 of Public Law 114-322, to provide assistance to eligible entities for lead reduction projects. The Agency is directed to brief the Committees prior to publishing its request for applications related to this new grant program.

Lead Testing.—Within a Title IV general provision, the bill provides $20,000,000 to begin a grant program for voluntary testing of drinking water for lead contaminants at schools and child care facilities, as authorized in section 2107 of Public Law 114-322. The Agency is directed to brief the Committees prior to publishing its request for applications related to this new grant program.

Brownfields Program.—The bill provides $80,000,000 for brownfields grants and directs that at least 10 percent of such grants be provided to areas in which at least 20 percent of the population has lived under the poverty level over the past 30 years as determined by censuses and the most recent Small Area Income and Poverty Estimates.

Use of Iron and Steel.—The bill includes language in Title IV General Provisions that stipulates requirements for the use of iron and steel in State Revolving Fund projects, and the agreement includes only the following guidance. The Committees acknowledge that EPA may issue a waiver of said requirements for *de minimis* amounts of iron and steel building materials. The Committees emphasize that any coating processes that are applied to the external surface of iron and steel components that otherwise qualify under the procurement preference shall not render such products ineligible for the procurement preference regardless of where the coating processes occur, provided that final assembly of the products occurs in the United States.

Diesel Emission Reductions Grants (DERA).—The bill provides $75,000,000 for DERA grants. For fiscal year 2018, the Committees direct the Agency to continue to make at least 70 percent of DERA grants available to improve air quality in non-attainment areas.

Targeted Airshed Grants.—The bill provides $40,000,000 for targeted airshed grants to reduce air pollution in non-attainment areas. The Agency is directed to distribute the grants on a competitive basis using the same criteria as specified under this heading in the explanatory statement accompanying Division G of the Consolidated Appropriations Act, 2017 (Public Law 115-31). Not later than the end of

fiscal year 2018, the Agency should provide a report to the Committees on Appropriations that includes a table showing how fiscal year 2016 and 2017 funds were allocated. The table should also include grant recipients and metrics for anticipated or actual results.

Animas River Spill.—The Committees concur with the Agency's decision to reconsider its previous determination to deny claims for damages from the Animas River Spill by invoking the discretionary act exemption in the Federal Tort Claims Act, but are concerned that little progress has been made on processing or paying out claims. The Committees are also concerned that the Agency is applying or may apply an inconsistent standard that discriminates against certain claimants. The Committees expect the Agency and the Federal government to take a clear and consistent position on the question of whether they are responsible for damages caused to others by the Gold King Mine release. The Committees support paying out all legitimate claims from the Judgment Fund, consistent with the Federal Tort Claims Act, and communicating all relevant aspects of the claims process clearly to all affected communities, State, local and Tribal governments, along with the Committees. Within 30 days of enactment of this Act, the Agency shall provide to the Committees a written report detailing the status of the review of the legal basis for allowing or rejecting claims and the date by which such review will be complete, the current process underway for processing claims, the status of all claims, including reconsidered claims, the Agency's complete plan for processing all claims, and any other future planned actions related to current or future claims. Finally, the bill provides $4,000,000 for a long-term water quality monitoring program, as authorized by Public Law 114–322. The Agency is directed to continue to work in consultation with affected States and Tribes on that effort.

Categorical Grants.—The bill provides $1,076,041,000 for Categorical Grants and funding levels are specified in the table at the end of this division. Within this amount, the Beaches Protection program and Radon program are both maintained at the fiscal year 2017 enacted levels. The Agency shall continue to allocate radon grants in fiscal year 2018 following the direction in House Report 114-632.

The amount also includes $228,219,000 for the State and Local Air Quality Management grant program, and the Agency is directed to allocate funds for this program using the same formula as fiscal year 2015. The Committees understand the Office of Air and Radiation was able to provide some additional funds to the States in fiscal year 2016 using balances. The Committees encourage the Agency to do the same in fiscal year 2018 and to provide those additional funds to the regions with the highest need.

Categorical Grant: Multipurpose Grants.—Because the States are expected to take a leading role in compliance with environmental cleanup, the agreement provides $10,000,000 for Multipurpose grants to States and Tribes. The Committees were disappointed with the Agency's funding formula in fiscal year 2016 because it did not provide the flexibility that Congress expected and instead gave preference to

air programs. In fiscal year 2018, the Agency is directed to give maximum flexibility to States, so that States, not the Agency, may determine where funds from this grant program are of most value.

Categorical Grant: Nonpoint Source (Sec. 319).—The bill provides $170,915,000 and the Committees expect the Agency to examine the allocation formula to ensure that the resources are being spent in areas with the most pressing needs.

WATER INFRASTRUCTURE FINANCE AND INNOVATION PROGRAM ACCOUNT

The bill provides a total of $63,000,000 for the Water Infrastructure Finance and Innovation Act (WIFIA) program. Within base funding in Title II, the bill provides $10,000,000 for the WIFIA program, and a Title IV general provision provides an additional $53,000,000 for the program. By utilizing $5,000,000 in base funds and $3,000,000 in Title IV funds, the Agency may use up to a total of $8,000,000 to assist with the administrative expenses for the program. The remaining $55,000,000 in WIFIA funds is provided for direct loan subsidization which may translate into a potential loan capacity in excess of $6,000,000,000 to eligible entities for water infrastructure projects.

Greater investment in the replacement of aging infrastructure will help mitigate nationwide issues the Committees are tracking related to contaminants such as lead and arsenic, help address Combined Sewer Overflows and Sanitary Sewer Overflows, and allow systems to improve water delivery for residents. The Committees expect that the Agency will issue loans for the first time in fiscal year 2018 and the Committees intend to closely monitor implementation.

ADMINISTRATIVE PROVISIONS—ENVIRONMENTAL PROTECTION AGENCY (INCLUDING TRANSFERS AND RESCISSION OF FUNDS)

The bill continues several administrative provisions from previous years.

Rescission.—The bill rescinds $96,198,000 of unobligated balances from the State and Tribal Assistance Grants account. The Agency shall calculate the requisite percent reduction necessary to rescind such amounts from new obligational authority provided to this account, both from the direct appropriation and from amounts provided in a general provision in Title IV, and apply it across program project areas by formula. The Agency is directed to submit, as part of the operating plan, detail on the application of such rescissions by program project area.

DIVISION G -- DEPARTMENT OF THE INTERIOR, ENVIRONMENT, AND RELATED AGENCIES APPROPRIATIONS ACT, 2018

(Amounts in thousands)

	FY 2017 Enacted	FY 2018 Request	Final Bill	Final Bill vs Enacted	Final Bill vs Request
TITLE II - ENVIRONMENTAL PROTECTION AGENCY					
Science and Technology					
Clean Air	116,541	85,708	116,541	---	+30,833
(GHG reporting program)	(8,018)	---	(8,018)	---	(+8,018)
Enforcement	13,669	10,444	13,669	---	+3,225
Homeland security	33,122	23,097	33,122	---	+10,025
Indoor air and Radiation	5,997	3,339	5,997	---	+2,658
IT / Data management / Security	3,089	2,725	3,089	---	+364
Operations and administration	68,339	79,334	68,339	---	-10,995
Pesticide licensing	6,027	4,996	6,027	---	+1,031
Research: Air and energy	91,906	30,592	91,906	---	+61,314
Research: Chemical safety and sustainability	126,930	84,189	126,930	---	+42,741
(Research: Computational toxicology)	(21,409)	(17,165)	(21,409)	---	(+4,244)
(Research: Endocrine disruptor)	(16,253)	(10,122)	(16,253)	---	(+6,131)
Research: National priorities	4,100	---	4,100	---	+4,100
Research: Safe and sustainable water resources	106,257	68,520	106,257	---	+37,737
Research: Sustainable and healthy communities	134,327	54,211	134,327	---	+80,116
Water: Human health protection	3,519	3,657	3,519	---	-138
Subtotal, Science and Technology	713,823	450,812	713,823	---	+263,011

DIVISION G -- DEPARTMENT OF THE INTERIOR, ENVIRONMENT, AND RELATED AGENCIES APPROPRIATIONS ACT, 2018

(Amounts in thousands)

	FY 2017 Enacted	FY 2018 Request	Final Bill	Final Bill vs Enacted	Final Bill vs Request
Rescission	-7,350	---	-7,350	---	-7,350
Total, Science and Technology	706,473	450,812	706,473	---	+255,661
(by transfer from Hazardous Substance Superfund)	(15,496)	(12,435)	(15,496)	---	(+3,061)
Environmental Programs and Management					
Brownfields	25,593	16,082	25,593	---	+9,511
Clean air	273,108	143,167	273,108	---	+129,941
(GHG reporting program)	(95,436)	(13,580)	(95,436)	---	(+81,856)
Compliance	101,665	86,431	101,665	---	+15,234
Enforcement	240,637	194,307	240,637	---	+46,330
(Environmental justice)	(6,737)	---	(6,737)	---	(+6,737)
Environmental protection: National priorities	12,700	---	12,700	---	+12,700

DIVISION G -- DEPARTMENT OF THE INTERIOR, ENVIRONMENT, AND RELATED AGENCIES APPROPRIATIONS ACT, 2018

(Amounts in thousands)

	FY 2017 Enacted	FY 2018 Request	Final Bill	Final Bill vs Enacted	Final Bill vs Request
Geographic programs:					
Great Lakes Restoration Initiative	300,000	---	300,000	---	+300,000
Chesapeake Bay	73,000	---	73,000	---	+73,000
San Franciso Bay	4,819	---	4,819	---	+4,819
Puget Sound	28,000	---	28,000	---	+28,000
Long Island Sound	8,000	---	12,000	+4,000	+12,000
Gulf of Mexico	8,542	---	12,542	+4,000	+12,542
South Florida	1,704	---	1,704	---	+1,704
Lake Champlain	4,399	---	8,399	+4,000	+8,399
Lake Pontchartrain	948	---	948	---	+948
Southern New England Estuaries	5,000	---	5,000	---	+5,000
Other geographic activities	1,445	---	1,445	---	+1,445
Subtotal	435,857	---	447,857	+12,000	+447,857
Homeland security	10,195	8,498	10,195	---	+1,697
Indoor air and radiation	27,637	2,257	27,637	---	+25,380
Information exchange / Outreach	126,538	83,295	126,538	---	+43,243
(Children and other sensitive populations: Agency coordination)	(6,548)	(2,018)	(6,548)	---	(+4,530)
(Environmental education)	(8,702)	---	(8,702)	---	(+8,702)
International programs	15,400	4,051	15,400	---	+11,349
IT / Data management / Security	90,536	82,066	90,536	---	+8,470
Legal/science/regulatory/economic review	111,414	98,446	111,414	---	+12,968
Operations and administration	480,751	496,483	480,751	---	-15,732
Pesticide licensing	102,363	85,526	109,363	+7,000	+23,837

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DIVISION G -- DEPARTMENT OF THE INTERIOR, ENVIRONMENT, AND RELATED AGENCIES APPROPRIATIONS ACT, 2018

(Amounts in thousands)

	FY 2017 Enacted	FY 2018 Request	Final Bill	Final Bill vs Enacted	Final Bill vs Request
Resource Conservation and Recovery Act (RCRA)	104,877	73,093	109,377	+4,500	+36,284
Toxics risk review and prevention	92,521	65,036	92,521	---	+27,485
(Endocrine disruptors)	(7,553)	---	(7,553)	---	(+7,553)
Underground storage tanks (LUST / UST)	11,295	5,612	11,295	---	+5,683
Water: Ecosystems:					
National estuary program / Coastal waterways	26,723	---	26,723	---	+26,723
Wetlands	21,065	18,115	21,065	---	+2,950
Subtotal	47,788	18,115	47,788	---	+29,673
Water: Human health protection	98,507	80,044	98,507	---	+18,463
Water quality protection	210,417	174,975	210,417	---	+35,442
Subtotal, Environmental Programs and Management	2,619,799	1,717,484	2,643,299	+23,500	+925,815
Rescission	-21,800	---	-45,300	-23,500	-45,300
Total, Environmental Programs and Management	2,597,999	1,717,484	2,597,999	---	+880,515

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(Amounts in thousands)

	FY 2017 Enacted	FY 2018 Request	Final Bill	Final Bill vs Enacted	Final Bill vs Request
Hazardous Waste Electronic Manifest System Fund					
E-Manifest System Fund	3,178	3,674	3,674	+496	---
Offsetting Collections	---	-3,674	-3,674	-3,674	---
Total, Hazardous Waste Electronic Manifest System Fund	3,178	---	---	-3,178	---
Office of Inspector General					
Audits, evaluations, and investigations	41,489	37,475	41,489	---	+4,014
(by transfer from Hazardous Substance Superfund)	(8,778)	(3,900)	(8,778)	---	(+4,878)
Buildings and Facilities					
Homeland security: Protection of EPA personnel and infrastructure	6,676	6,176	6,676	---	+500
Operations and administration	27,791	33,377	27,791	---	-5,586
Total, Buildings and Facilities	34,467	39,553	34,467	---	-5,086
Hazardous Substance Superfund					
Audits, evaluations, and investigations	8,778	3,900	8,778	---	+4,878
Compliance	995	605	995	---	+390
Enforcement	166,375	99,287	166,375	---	+67,088
Homeland security	32,616	16,999	32,616	---	+15,617
Indoor air and radiation	1,985	---	1,985	---	+1,985

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DIVISION G -- DEPARTMENT OF THE INTERIOR, ENVIRONMENT, AND RELATED AGENCIES APPROPRIATIONS ACT, 2018

(Amounts in thousands)

	FY 2017 Enacted	FY 2018 Request	Final Bill	Final Bill vs Enacted	Final Bill vs Request
Information exchange / Outreach	1,328	838	1,328	---	+490
IT /data management/security	14,485	11,399	14,485	---	+3,086
Legal/science/regulatory/economic review	1,253	349	1,253	---	+904
Operations and administration	128,105	101,942	128,105	---	+26,163
Research: Chemical safety and sustainability	2,824	5,305	2,824	---	-2,481
Research: Sustainable communities	11,463	5,655	11,463	---	+5,808
Superfund cleanup:					
Superfund: Emergency response and removal	181,306	147,212	181,306	---	+34,094
Superfund: Emergency preparedness	7,636	7,216	7,636	---	+420
Superfund: Federal facilities	21,125	19,553	21,125	---	+1,572
Superfund: Remedial	508,495	341,803	511,673	+3,178	+169,870
Subtotal	718,562	515,784	721,740	+3,178	+205,956
Total, Hazardous Substance Superfund	1,088,769	762,063	1,091,947	+3,178	+329,884
(transfer out to Inspector General)	(-8,778)	(-3,900)	(-8,778)	---	(-4,878)
(transfer out to Science and Technology)	(-15,496)	(-12,435)	(-15,496)	---	(-3,061)
Leaking Underground Storage Tank Trust Fund (LUST)					
Enforcement	620	559	620	---	+61
Operations and administration	1,352	1,346	1,352	---	+6
Research: Sustainable communities	320	320	320	---	---

(Amounts in thousands)

	FY 2017 Enacted	FY 2018 Request	Final Bill	Final Bill vs Enacted	Final Bill vs Request
Underground storage tanks (LUST / UST)	89,649	45,204	89,649	---	+44,445
(LUST/UST)	(9,240)	(6,364)	(9,240)	---	(+2,876)
(LUST cooperative agreements)	(55,040)	(38,840)	(55,040)	---	(+16,200)
(Energy Policy Act grants)	(25,369)	---	(25,369)	---	(+25,369)
Total, Leaking Underground Storage Tank Trust Fund	91,941	47,429	91,941	---	+44,512
Inland Oil Spill Program					
Compliance	139	124	139	---	+15
Enforcement	2,413	2,266	2,413	---	+147
Oil	14,409	12,144	14,409	---	+2,265
Operations and administration	584	680	584	---	-96
Research: Sustainable communities	664	503	664	---	+161
Total, Inland Oil Spill Program	18,209	15,717	18,209	---	+2,492
State and Tribal Assistance Grants (STAG)					
Alaska Native villages	20,000	---	20,000	---	+20,000
Brownfields projects	80,000	69,000	80,000	---	+11,000
Clean water state revolving fund (SRF)	1,393,887	1,393,887	1,393,887	---	---
Diesel emissions grants	60,000	10,000	75,000	+15,000	+65,000
Drinking water state revolving fund (SRF)	863,233	863,233	863,233	---	---

(Amounts in thousands)

	FY 2017 Enacted	FY 2018 Request	Final Bill	Final Bill vs Enacted	Final Bill vs Request
Mexico border	10,000	---	10,000	---	+10,000
Targeted airshed grants	30,000	---	40,000	+10,000	+40,000
Water quality monitoring (P.L. 114-322)	4,000	---	4,000	---	+4,000
Subtotal, Infrastructure assistance grants	2,461,120	2,336,120	2,486,120	+25,000	+150,000
Categorical grants:					
Beaches protection	9,549	---	9,549	---	+9,549
Brownfields	47,745	33,358	47,745	---	+14,387
Environmental information	9,646	6,739	9,646	---	+2,907
Hazardous waste financial assistance	99,693	69,652	99,693	---	+30,041
Lead	14,049	---	14,049	---	+14,049
Nonpoint source (Sec. 319)	170,915	---	170,915	---	+170,915
Pesticides enforcement	18,050	11,050	18,050	---	+7,000
Pesticides program implementation	12,701	8,874	12,701	---	+3,827
Pollution control (Sec. 106)	230,806	161,257	230,806	---	+69,549
(Water quality monitoring)	(17,848)	(12,470)	(17,848)	---	(+5,378)
Pollution prevention	4,765	---	4,765	---	+4,765
Public water system supervision	101,963	71,238	101,963	---	+30,725
Radon	8,051	---	8,051	---	+8,051
State and local air quality management	228,219	159,450	228,219	---	+68,769
Toxics substances compliance	4,919	3,437	4,919	---	+1,482
Tribal air quality management	12,829	8,963	12,829	---	+3,866
Tribal general assistance program	65,476	45,746	65,476	---	+19,730
Underground injection control (UIC)	10,506	7,340	10,506	---	+3,166

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(Amounts in thousands)

	FY 2017 Enacted	FY 2018 Request	Final Bill	Final Bill vs Enacted	Final Bill vs Request
Underground storage tanks	1,498	---	1,498	---	+1,498
Wetlands program development	14,661	10,243	14,661	---	+4,418
Multipurpose grants	---	---	10,000	+10,000	+10,000
Subtotal, Categorical grants	1,066,041	597,347	1,076,041	+10,000	+478,694
Total, State and Tribal Assistance Grants	3,527,161	2,933,467	3,562,161	+35,000	+628,694
Water Infrastructure Finance and Innovation Program					
Administrative Expenses	2,000	3,000	5,000	+3,000	+2,000
Direct Loan Subsidy	8,000	17,000	5,000	-3,000	-12,000
Total, Water Infrastructure Finance and Innovation Program	10,000	20,000	10,000	---	-10,000
Administrative Provisions					
Rescission	-61,198	-369,000	-96,198	-35,000	+272,802
TOTAL, TITLE II, ENVIRONMENTAL PROTECTION AGENCY	8,058,488	5,655,000	8,058,488	---	+2,403,488
Appropriations	(8,148,836)	(6,024,000)	(8,207,336)	(+58,500)	(+2,183,336)
Rescissions	(-90,348)	(-369,000)	(-148,848)	(-58,500)	(+220,152)
(By transfer)	(24,274)	(16,335)	(24,274)	---	(+7,939)
(Transfer out)	(-24,274)	(-16,335)	(-24,274)	---	(-7,939)

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DIVISION G -- DEPARTMENT OF THE INTERIOR, ENVIRONMENT, AND RELATED AGENCIES APPROPRIATIONS ACT, 2018

(Amounts in thousands)

	FY 2017 Enacted	FY 2018 Request	Final Bill	Final Bill vs Enacted	Final Bill vs Request
United States Geological Survey					
Surveys, Investigations, and Research (emergency).....	---	---	42,246	+42,246	+42,246
Departmental Offices					
Insular Affairs:					
Assistance to Territories (emergency).....	---	---	3,000	+3,000	+3,000
Office of Inspector General (emergency).....	---	---	2,500	+2,500	+2,500
Total, Departmental Offices.....	---	---	5,500	+5,500	+5,500
Total, Department of the Interior.....	---	---	515,975	+515,975	+515,975
Environmental Protection Agency					
Hazardous Substance Superfund (emergency).....	---	---	6,200	+6,200	+6,200
Leaking Underground Storage Tank Trust Fund (emergency).....	---	---	7,000	+7,000	+7,000
State and Tribal Assistance Grants (emergency).....	---	---	50,000	+50,000	+50,000
Total, Environmental Protection Agency.....	---	---	63,200	+63,200	+63,200

Message

From: Shenk, Kelly [shenk.kelly@epa.gov]
Sent: 11/15/2017 3:36:06 PM
To: Subramanian, Hema [Subramanian.Hema@epa.gov]
CC: Sands, Jeffrey [sands.jeffrey@epa.gov]
Subject: CTIC Tour Planned for Delmarva in July 2018
Attachments: CTIC 2018 Conservation In Action Tour_13NOV17.docx

Hi Hema, it's never too early to put something on Jeff's radar screen. CTIC is planning a one-day farm tour on the Delmarva (likely MD Eastern Shore) and would love for Jeff Sands and our Regional Administrator, Cosmo Servidio to attend. I'm on the Planning Committee so let me know if there are already dates in July we should stay away from. Right now they are considering: July 10 to 12 or July 16 to 20 (would be better for those harvesting or double-cropping). K

Kelly Shenk
Agricultural Advisor
EPA Region III Water Protection Division
shenk.kelly@epa.gov
410.267.5728

Mailing Address:
EPA Chesapeake Bay Program Office
410 Severn Avenue, Suite 112
Annapolis, MD 21403

From: Herges, Adam - Plymouth [mailto:Adam.Herges@mosaicco.com]
Sent: Wednesday, November 15, 2017 10:17 AM
To: cspencer@growmark.com; Willard, Bob <bobw@willardag.com>; Shenk, Kelly <shenk.kelly@epa.gov>; Lee McDaniel <lee-mcdaniel@nacdnet.org>; Hans W. Schmidt -MDA- <hans.schmidt@maryland.gov>; Lister, Genevieve - NRCS, Annapolis, MD <genevieve.lister@md.usda.gov>; Lindsay Thompson <[redacted]>; Bill Angstadt <angstadtconsult@aol.com>; Tammy Taylor <taylor@ctic.org>; Chad Watts <watts@ctic.org>
Cc: Hunter Carpenter <hunter@aradc.org>; 'Peyton Harper (pharper@tfi.org)' <pharper@tfi.org>; ralph.bagwell@bayer.com; Paul Poister <Paul.Poister@agrium.com>; schmidtmarka@johndeere.com; goeser@ncga.com
Subject: CTIC Tour notes from Monday's call

All,

Thank you all for being on the committee and taking the time on Monday to participate on the call. Attached are the tour notes. Hunter and I will send out a doodle poll via email on Friday to identify a date for our next call.

In the meantime, CTIC staff, Hunter, and I will pull together information on hotels and possible venue options for the social reception. We will have this information ready for the next call.

Please continue to share ideas on possible tour stops and I will compile them with the tour notes. Our action item for the next call or asap will be to lock down the exact tour date from either the 2nd or 3rd week in July.

Regards,

Mosaic | **Adam P. Herges | Sustainability Agronomist**
The Mosaic Company | 3033 Campus Drive| Suite E490 | Minneapolis, Minnesota 55441
W: [redacted] M: [redacted] | E: adam.herges@mosaicco.com | W: www.mosaicco.com

We help the world grow the food it needs.

CTIC 2018 Conservation In Action Tour

General Tour Location: **Delmarva / Chesapeake Bay**

Airport: **BWI (Baltimore)**

Hotel: **Annapolis**

Timeframe: **July**

- July 10 to 12
- July 16 to 20 (would be better for those harvesting or double-cropping)

Tour is one full day with a social reception the night before. Dinner will conclude the tour and will be the last stop of the day.

Location of tour: eastern side of Bay (along Route 50)

Anticipated attendance numbers: **between 120 and 200**. Need 3 to 4 coach buses.

Hotel: Tammy (CTIC Staff) will send spec sheet to Annapolis Convention and Visitors Bureau for them to send RFP to all hotels in the area

Tour Steering Committee:

1. Chuck Spencer, Growmark
2. Bob Willard, Willard Ag Services
3. Kelly Shenk, U.S. EPA Chesapeake Bay Program Office
4. Lee McDaniel, farmer and president of Maryland SWCD
5. Hans Schmidt, Maryland Dept of Agriculture
6. Genevieve Lister, Maryland NRCS
7. Lindsay Thompson, DE-MD Agribusiness Association
8. Bill Angstadt, DE-MD Agribusiness Association
9. Hunter Carpenter (co-chair)
10. Adam Herges (co-chair)
11. Include CTIC staff on calls

Themes and Slogans – Resource Concerns

1. Partnerships
2. Technology use on the farm
3. Water Quality – bioreactors, control structures, 4Rs, addressing water quality in bay (through the partnerships)
4. Cover Crops – Maryland program
5. Manure and poultry liter
6. Nitrogen Modeling
7. Land use/livestock: Poultry

Social/Dinner ideas:

- Brewery or vineyard for dinner
- Annapolis Waterfront Hotel, [HYPERLINK "http://www.annapoliswaterfront.com/meetings/capacity-chart"]
- Chesapeake Bay Brewing Company, [HYPERLINK "http://www.chesbrewco.com/eventhosting.html"]

Chesapeake Bay program come to speak and/or Secretary of Ag from Maryland to come speak at the social event.

Possible tour agenda:

During breakfast discuss the success story on the bay – what has been done to help clean up the bay. Where we were 25 years ago and what collaborative efforts have been done to help address the environmental concerns

- Chesapeake Bay office (EPA)
- Agricultural innovations and progress in addressing non-point sources.

Partnerships to highlight – a model for other places in the country

Cover crops – the Maryland Cover Crop Program

Tour stops following breakfast would include 2-4 farm stops with a dinner at a winery or something similar.

Possible tour stop ideas:

1. **Wye Research and Education Center, 124 Wye Narrows Dr, Queenstown, MD 21658**
   Planting demonstrations, GIS mapping, 4R nutrient stewardship, manure and litter research plots. Possibility of having a soil pit - NRCS soil scientist to discuss Maryland soils.

2. **Hutchison Farm, 11229 Lewistown Rd., Cordova, MD 21625**
   The Hutchison Brothers grow corn, soybeans, wheat, barley, peas and lima beans for processing, and cucumbers for pickling. Their home farm sits on the Tuckahoe River and is a showcase for advanced nutrient management practices including Greenseeker and bioreactors (previously studied through CIG), bioreactor, water control structures, irrigation water management through AMA, and waste storage through CBWI. They can demonstrate a 10 year history of a field and the technology and practices that went into it over time.

3. **Councell Farms, 11773 Old Skipton Road Cordova, MD**
   10th generation farmer Chip Councell is a well-known fixture on the Eastern Shore. 22 attractions for agritourists. His 1300 acres of grain and vegetables embodies conservation and agriculture awareness. He even converted a combine to playground equipment.

4. **Murphy Farms, 5626 Long Pine Road, Rhodesdale, MD**

Investment that state has put into: poultry operation with company from Ireland. Repurposing poultry litter for energy.

5. Bayer and SHP are working with a grower (Harborview Farms [HYPERLINK "http://www.harborviewfarms.net/"]) on the Eastern Shore to as a site for an SHP demonstration and as a Forward Farm ([HYPERLINK "https://www.cropscience.bayer.com/en/crop-science/forwardfarming"]). The plan is to arrange demonstrations on sustainability, soil health and stewardship for a primary audience of regulators, congressional staffers and members of Congress. The grower (Trey Hill) is a very progressive grower. If we want to use this site, then it may be a good idea to include Joanne Whalen (Professor Emeritus and former Program Leader for Delaware Cooperative Extension Service) on the committee. Joanne and her husband (Mark) are independent crop consultants for Harborview Farms now.

6. DowDupont has an extremely nice facility ca. 7 miles from Harborview Farms that is used for research, demonstrations and education, [HYPERLINK "http://www.dupont.com/products-and-services/crop-protection/chesapeake-farms/conference-center.html"], I would anticipate that there multiple tour opportunities at Chesapeak Farms. There is also a corporate retreat on site at Chesapeake Farms, it be just terrible if the board had to stay at Chesapeake Farms and have the board meeting. Suggest adding the DowDupont board member to the committee.

7. I've been in contact with USDA at Beltsville about other tour opportunities. The USDA farm in Beltsville has ca 1600 acres of crop research and a similar amount for cattle research. They have been very open to having a tour on their site. The drive between Beltsville and the Eastern Shore is ca.1.5 hours, so it would be challenging to do both.

8. **Triple Creak Winery, 11138 Three Bridge Branch Road, Cordova, MD 21625.**
   Paul Spies grows grains and has a vineyard and English cucumber greenhouse. Practices and programs include waste storage through CBWI and CREP buffers. The Spies family recently opened a winery.

   OR

9. **Layton's Chance Vineyard & Winery 4225 New Bridge Rd, Vienna, MD 21869**
   Over the years the Layton farm has grown beef cattle, corn, soybeans, wheat, rye, barley, sweet corn, tomatoes, watermelons, and grapes. In an effort to diversify their farming operation the family reevaluated their business and planted their first grapes in 2007. Presently the farm covers about 1,886 acres, of which 1,167 acres is used for grain crops, 101 acres are reserved for CRP and wildlife plantings, 600 acres are woodlands, and 18 acres form a vineyard and winery.

Both have retail locations in the area. *Lean on retail members of the steering committee for a couple suggestions on possible tour stops.*

Identified people to invite: Bill Northey, NRCS Chief, Jeff Sands with EPA.....

Message

From: Subramanian, Hema [Subramanian.Hema@epa.gov]
Sent: 2/15/2018 3:53:06 PM
To: Daniel Botts [Daniel.Botts@ffva.com]
CC: Sands, Jeffrey [sands.jeffrey@epa.gov]
Subject: RE: Meetings on the 20th and 21st, MCFA Technical Committee and Water Monitoring Workshop, NAFTA TWG IWG Conference Call
Attachments: MCFA Agenda -- 02202018.docx; NAFTA TWG Call Agenda.pdf; Workshop Agenda.docx

Daniel,

I've confirmed Jeff can join you from 11:30-12:30 at your Minor Crop Farmers Alliance annual meeting next Wednesday, the 21st at the following address:

McDermott, Will & Emery
500 North Capitol Street, NW
Washington, DC

I am cc'ing Jeff here, so that you have his contact information and he can see our exchange. Will you want him to come prepared with formal remarks for the group, and if so, on any topics in particular? Or if it is more of an informal opportunity to meet with the group, that is fine as well. Just let us know if there are any other logistics/entrance procedures he should be aware of.

Thank you,
---Hema.

Hema Subramanian
Acting Special Assistant to the Senior Advisor for Agriculture
Office of the Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Phone (202) 564-5041
subramanian.hema@epa.gov

From: Daniel Botts [mailto:Daniel.Botts@ffva.com]
Sent: Thursday, February 15, 2018 10:35 AM
To: Subramanian, Hema <Subramanian.Hema@epa.gov>
Subject: RE: Meetings on the 20th and 21st, MCFA Technical Committee and Water Monitoring Workshop, NAFTA TWG IWG Conference Call

Hema,

I just got off the phone with our leadership group and would like to invite Jeff to meet with us at McDermott, Will and Emery. Our annual meeting will probably wrap up shortly after 11:00 so 11:30 until 12:30 would work for us. We will have lunch brought in, if that works for you, and if we run over a little it won't impact the work shop that starts at 1:30. I will let the MCFA Membership know about the opportunity to meet via email and will be able to provide a list of attendees from our side on Monday. I am anticipating a probable group of about 10 to 12 (it could possibly be a few more) if we have the meeting at MWE. If this doesn't work for you we would still plan to make the 11:30 to 12:30 time slot work at Federal Triangle.

Dan

FFVA

From: Subramanian, Hema [mailto:Subramanian.Hema@epa.gov]
Sent: Wednesday, February 14, 2018 4:48 PM
To: Daniel Botts <Daniel.Botts@ffva.com>
Subject: RE: Meetings on the 20th and 21st, MCFA Technical Committee and Water Monitoring Workshop, NAFTA TWG IWG Conference Call

I think the best option for Jeff will be Wednesday between 11:30-12:30. But could you clarify if that would be meeting here at the EPA office, or if it would it need to be a lunch? If it would be a lunch meeting, I can check whether Jeff would be able to meet you at your N. Capitol location or a restaurant.

Thank you,
---Hema.

Hema Subramanian
Acting Special Assistant to the Senior Advisor for Agriculture
Office of the Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Phone (202) 564-5041
subramanian.hema@epa.gov

From: Daniel Botts [mailto:Daniel.Botts@ffva.com]
Sent: Wednesday, February 14, 2018 4:33 PM
To: Subramanian, Hema <Subramanian.Hema@epa.gov>
Subject: RE: Meetings on the 20th and 21st, MCFA Technical Committee and Water Monitoring Workshop, NAFTA TWG IWG Conference Call

Hema, on Tuesday we can expand the lunch break to an hour from 30 minutes if he wanted to come over and meet with us then, on Wednesday – the meeting is scheduled from 9:30 until 11:30 but I don't think it will last the full two hours.. We could plan to meet Him at your location around 11:30 and that would give me at least an hour before I would have to head back over to MWE – the rest of the group (probably five to six people) could stay until closer to 1:00 pm. The OPP workshop in the afternoon is scheduled for 3 hours but I don't think it will last that long so we could probably meet any time after 4:00.

Dan

FFVA

From: Subramanian, Hema [mailto:Subramanian.Hema@epa.gov]
Sent: Wednesday, February 14, 2018 4:24 PM
To: Daniel Botts <Daniel.Botts@ffva.com>
Subject: RE: Meetings on the 20th and 21st, MCFA Technical Committee and Water Monitoring Workshop, NAFTA TWG IWG Conference Call

Thank you, Mr. Botts. Can you clarify the exact times and locations on each day to check with Jeff about? Sounds like you wouldn't have much time on Wednesday if you met at noon?
---Hema.

Hema Subramanian
Acting Special Assistant to the Senior Advisor for Agriculture
Office of the Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Phone (202) 564-5041
subramanian.hema@epa.gov

From: Daniel Botts [mailto:Daniel.Botts@ffva.com]
Sent: Wednesday, February 14, 2018 4:17 PM
To: Subramanian, Hema <Subramanian.Hema@epa.gov>
Subject: FW: Meetings on the 20th and 21st, MCFA Technical Committee and Water Monitoring Workshop, NAFTA TWG IWG Conference Call

Hema,

This is the email notification that went out last week to the MCFA Membership concerning the meetings Next week. As I mentioned, we would love to have Jeff come over during our lunch break for an informal meet and greet (he is welcome to stay for any of the meeting he would like). On Wednesday we have a two hour break around the noon hour if he would like for a smaller group to come to him. I will need to be back at McDermott, Will and Emery by 1:00 to prepare for the Workshop with OPP EFED.

It was great speaking with you and I look forward to hearing from the Smart Sectors group.

Dan

FFVA

From: Daniel Botts
Sent: Thursday, February 8, 2018 3:16 PM
To: Andy LaVigne <alavigne@amseed.org>; Barbara Madden <Madden@nwhort.org>; Ben Sacher (bsacher@wga.com) <bsacher@wga.com>; Carlene Price - California Citrus Quality Council (cprice@ccqc.org) <cprice@ccqc.org>; Chris Voigt <cvoigt@potatoes.com>; Craig Regelbrugge (CraigR@americanHort.org) <CraigR@americanHort.org>; Daniel Botts <Daniel.Botts@ffva.com>; Donn Zea (dzea@cdpb.org) <dzea@cdpb.org>; Edward Ruckert (E-mail) <eruckert@mwe.com>; Gabriele Ludwig <gludwig@almondboard.com>; Gary Obenauf (gobenauf@agresearchconsulting.com) <gobenauf@agresearchconsulting.com>; Gary Van Sickle (gary@specialtycrops.org) <gary@specialtycrops.org>; James R. Cranney - California Citrus Quallity Council (Jcranney@ccqc.org) <Jcranney@ccqc.org>; jdemarchi@amseed.org; Jill Calabro (jillc@americanhort.org) <jillc@americanhort.org>; Joe Bischoff (JBischoff@cgagroup.com) <JBischoff@cgagroup.com>; John Keeling (JOHNK@nationalpotatocouncil.org) <JOHNK@nationalpotatocouncil.org>; Julia Stewart (jstewart@prclarity.com) <jstewart@prclarity.com>; Kate Woods (woods@nwhort.org) <woods@nwhort.org>; Kathy Means (kmeans@pma.com) <kmeans@pma.com>; Lucy Nieves <Lucy.Nieves@ffva.com>; Marcy L. Martin (mmartin@cafreshfruit.com) <mmartin@cafreshfruit.com>; Mark Powers (powers@nwhort.org) <powers@nwhort.org>; Mark W. Seetin (mseetin@usapple.org) <mseetin@usapple.org>; Matt Harris (mharris@potatoes.com) <mharris@potatoes.com>; Matt McInerney (E-mail) <mmcinerney@wga.com>; Mike Aerts <Mike.Aerts@ffva.com>; Mike Willett

(willett@treefruitresearch.com) <willett@treefruitresearch.com>; Nancy McBrady (nancy.mcbrady@maine.edu) <nancy.mcbrady@maine.edu>; Patrick Kole (patrick.kole@potato.idaho.gov) <patrick.kole@potato.idaho.gov>; Paul Schlegel (pauls@fb.org) <pauls@fb.org>; Peter Chaires <pchaires@flcitruspackers.org>; Philip Korson (E-mail) [Ex. 6]>; Rob Neenam (rob@clfp.com) <rob@clfp.com>; Robert Ehn (E-mail) <robertehn@sbcglobal.net>; Robert L. Guenther (rguenther@unitedfresh.org) <rguenther@unitedfresh.org>; Terry Humfeld (thumfeld@cranberryinstitute.org) <thumfeld@cranberryinstitute.org>; Todd Scholz (tscholz@usapulses.org) <tscholz@usapulses.org>; Tom Bellamore (E-mail) <tbellamore@avocado.org>
Cc: Alan R. Ayers <alan.ayers@bayer.com>; Alexander Domesle <alexander.domesle@ars.usda.gov>; Aline DeLucia (aline@Nasda.org) <aline@Nasda.org>; Allen Scarborough <allen.scarborough@bayer.com>; Barbara Glenn <barb@nasda.org>; Beau Greenwood <bgreenwood@croplifeamerica.org>; Burleson Smith [Ex. 6] [Ex. 6] Cindy Baker-Smith <csmith@gowanco.com>; Dan Campbell <dan.campbell@syngenta.com>; Daniel L. Kunkel <kunkel@aesop.rutgers.edu>; David L. Epstein <david.epstein@ars.usda.gov>; Diana Haynes <diana.haynes@ams.usda.gov>; Elizabeth Hill <elizabeth.hill2@ars.usda.gov>; Eric@nsgovstrat.com; Fay, Dan <Dan.Fay@valent.com>; Harold Browning <hwbr@citrusrdf.org>; Heidi B. Irrig <heidi.irrig@syngenta.com>; Iain D. Kelly <iain.kelly@bayer.com>; Janis McFarland <janis.mcfarland@syngenta.com>; Jeff Case <JCase@croplifeamerica.org>; Jerry Baron <jbaron@aesop.rutgers.edu>; Jill Schroeder <jill.schroeder@ars.usda.gov>; John G. Cummings Ph. D. <john_cummings@fmc.com>; John Kran <jkran@michfb.com>; Joseph Starr <joseph.starr@pepsico.com>; Juli Jessen <jljessen@gowanco.com>; Julie Chao <julie.chao@fas.usda.gov>; Julius Fajardo <julius.fajardo@ars.usda.gov>; Laura McConnell <laura.mcconnell@bayer.com>; Lori Berger <lori@agbusinessresources.com>; Mark A. Rasmussen <Mark.Rasmussen@FAS.USDA.GOV>; Mark Maslyn <[Ex. 6]>; Matt Lantz <matthewl@bryantchristie.com>; Maximilian A. Merrill <mmerrill@lawbc.com>; Ray S. McAllister <rmcallister@croplifeamerica.org>; [Ex. 6] Ronald Williams <ronaldwilliams@coca-cola.com>; Scott Rawlins <srawlins@wilburellis.com>; Sheryl H. Kunickis - USDA (sheryl.kunickis@osec.usda.gov) <sheryl.kunickis@osec.usda.gov>; Smith, Jeffrey <Jeffrey.Smith@valent.com>; Steven Bradbury <steve@spbradbury.com>; Teung Chin <Teung.Chin@ARS.USDA.GOV>
Subject: Meetings on the 20th and 21st, MCFA Technical Committee and Water Monitoring Workshop, NAFTA TWG IWG Conference Call

To All:

Please find attached the agendas for the MCFA technical Committee meeting and the MCFA/OPP Workshop on the Use of Monitoring Data in Pesticide Reevaluation. The time and location of the meetings are shown on the agenda. We will have teleconferencing available at both meetings. If plan to attend the Work Shop via teleconference please let me know by return email so I can send the presentations to you prior to the WS (around 1:00 pm on the 21st).

In addition, we will have a short conference call with the NAFTA TWG Industry Working Group at 5:00 pm following the technical committee meeting. For MCFA Members participating at the technical meeting I have arranged to use a smaller conference room at MWE to facilitate our groups participation. The agenda provided by Crop Life America for that meeting is also attached.

I have started a list of in person attendees at the meeting for MWE use in checking in people on the 20th and 21st, If you are planning to participate in person please let me know so I can provide the list to McDermott, Will and Emery , I will need this by COB on Monday February 19.

I look forward to seeing everyone on the 20th and 21st.

Dan

Daniel A. Botts

Vice President Industry Resources

Florida Fruit & Vegetable Association

Mailing Address:

P. O. Box 948153
Maitland, Florida 32794-8153

Street Address:

800 Trafalgar Court, Suite 200
Maitland, Florida 32751

Contact Information:

FFVA Main Number: (321) 214-5200
Direct Line: Ex. 6
Cell Phone: Ex. 6
Email Address: daniel.botts@ffva.com

Use of Monitoring Data in Pesticide Re-evaluation Work Shop

Wednesday, February 21, 2018

1:30 pm -- 4:30 pm

McDermott Building, Senate Conference Room

500 North Capitol Street, NW
Washington, DC 20001

Purpose of the meeting

To establish a common understanding of process and policies to drive the use of monitoring data in the pesticide revaluation process; MCFA asked EPA to provide a workshop on the issues and objectives that will be presented in the white paper under development for discussion by the Science Advisory Panel in the future. We are especially interested in the types and quality of data that is being considered and how it will be used. What considerations are being made regarding current models on the need to revise if monitoring data is used? How will temporal impacts of specific compound use be considered or included in the process? How industry generated information may be used to inform the decision process?

Participation

MCFA Technical Committee
MCFA Support Contact List
EPA OPP (EFED)

Proposed Agenda

- Introductions/Overview (10 Minutes)
- EPA Presentations (90 Minutes +/-)
  - Overview of DWA Process
  - Surface Water and Ground Water Modeling
    - Tiered Refinement Process
  - Quantitative and Qualitative Use of Monitoring Data
  - Efforts related to Monitoring SAP
  - Specific Data Needs from Specialty Crops
  - Future Advances in Drinking Water Assessments
- Q & A/Discussion (60 Minutes +/-)

Appointment

From: Keller, Kaitlin [keller.kaitlin@epa.gov]
Sent: 12/11/2017 10:47:19 PM
To: Keaney, Kevin [Keaney.Kevin@epa.gov]; Fitz, Nancy [Fitz.Nancy@epa.gov]; Davis, Kathy [Davis.Kathy@epa.gov]; Keigwin, Richard [Keigwin.Richard@epa.gov]; Kasai, Jeanne [Kasai.Jeanne@epa.gov]; Rivera-Lupianez, Ana [Rivera-Lupianez.Ana@epa.gov]; Pont, Richard [Pont.Richard@epa.gov]; Miller, Wynne [Miller.Wynne@epa.gov]; Pease, Anita [Pease.Anita@epa.gov]; Kiely, Timothy [Kiely.Timothy@epa.gov]; Wyatt, TJ [Wyatt.Tj@epa.gov]; Berwald, Derek [Berwald.Derek@epa.gov]; Garrison, Scott [Garrison.Scott@epa.gov]; Perlis, Robert [Perlis.Robert@epa.gov]; Parrott, Patricia [parrott.patricia@epa.gov]; Arling, Michelle [Arling.Michelle@epa.gov]; Dinkins, Darlene [Dinkins.Darlene@epa.gov]; Keller, Kaitlin [keller.kaitlin@epa.gov]; Bolen, Derrick [bolen.derrick@epa.gov]; Mosby, Jackie [Mosby.Jackie@epa.gov]; Park, Jennifer [park.jennifer@epa.gov]; Smith, Peterj [Smith.Peterj@epa.gov]; Hofmann, Angela [Hofmann.Angela@epa.gov]; Mclean, Kevin [Mclean.Kevin@epa.gov]; Lee, Andrew [Lee.Andrew@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Dourson, Michael [dourson.michael@epa.gov]; Peffers, Mel [Peffers.Mel@epa.gov]; Sands, Jeffrey [sands.jeffrey@epa.gov]; Hughes, Hayley [hughes.hayley@epa.gov]
CC: Baptist, Erik [baptist.erik@epa.gov]; Wise, Louise [Wise.Louise@epa.gov]; Hoyt, Sarita [Hoyt.Sarita@epa.gov]; Nelson, Tomeka [Nelson.Tomeka@epa.gov]; Burke, Marcella [burke.marcella@epa.gov]

Subject: WPS & C&T Meeting
Attachments: WPS and CT NPRM Schedule 12 04 17 (002).docx
Location: DCRoomEast3156/DC-EPA-EAST-OCSPP (Call in number Ex. 6 access code Ex. 6

Start: 12/13/2017 2:30:00 PM
End: 12/13/2017 3:00:00 PM
Show Time As: Tentative

Recurrence: Weekly
every Tuesday from 4:00 PM to 4:30 PM

Draft Schedule for Revising the WPS and Certification Rule (12/4/17)

This is an initial schedule to revise the WPS requirements for minimum age, designated representative and application exclusion zone and the certification minimum age requirements. Some relevant assumptions and questions include:

-
-
-
-
-
-

Ex. 5 Deliberative Process (DP)

Date	Actions: Issue notice and comment rulemaking to address 3 topics in WPS and one topic in the Certification rule.

Ex. 5 Deliberative Process (DP)

Message

From: Hope, Brian [Hope.Brian@epa.gov]
Sent: 12/11/2017 9:21:41 PM
To: Ford, Hayley [ford.hayley@epa.gov]; Bowman, Liz [Bowman.Liz@epa.gov]; Sands, Jeffrey [sands.jeffrey@epa.gov]
Subject: FW: You were featured in Agri-Pulse!
Attachments: Agri-Pulse-12062017.pdf

From: Paige Dye [mailto:paige@agri-pulse.com]
Sent: Monday, December 11, 2017 3:47 PM
Subject: You were featured in Agri-Pulse!

Good afternoon,

I wanted to let you know you were featured on pages 18-20 of our weekly newsletter, Agri-Pulse. I have attached a PDF of the newsletter and have added you to our four-week free trial subscription list. There is no obligation to continue once the four weeks are up, but many find our concise and up-to-date news both in our newsletter and on our website www.Agri-Pulse.com to be helpful.

Agri-Pulse is your comprehensive weekly report of the latest in agricultural information. We take a holistic approach to covering current farming and rural news and we never miss a beat. The world of agriculture extends beyond what's growing in your field or living in your barn, and here at Agri-Pulse, we understand that.

We make it our duty to inform you of the most up-to-date agricultural and rural policy decisions being made in Washington D.C. and examine how they will affect you - the farmer, the lobbyist, the government employee, the educator, the consultant or the concerned citizen. We investigate several aspects of the food, fuel, feed, and fiber industries, looking at the economic, statistical, and financial trends and evaluate how these changes will impact your business. And, we provide insight on the people and players who are making these things happen. Farm and rural policy is much more than just letters on a page and they extend far beyond the lawmakers and regulators who write them in Washington.

Agri-Pulse provides you with a weekly update on how these decisions will affect your productivity, your pocketbook, and your livelihood. Whether it be new developments in international trade, organic foods, farm credit and loan policies or climate change legislation, we keep you abreast of the information you need to stay on the cutting edge. Also, please check out our website at www.Agri-Pulse.com for daily ag news!

If you should have any problems receiving your newsletters, please just let me know and I will assist!

Kind regards,

Paige Dye
Assistant Marketing Manager
Paige@agri-pulse.com
110 Waterside Lane
Camdenton, MO 65020
Office: (573) 873-0800
Cell: Ex. 6

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December 6, 2017 Volume 13, Number 47

Republicans rush to finish tax bill that promises farm relief

Congressional Republicans are gearing up for fast-paced, high-stakes negotiations to deliver a sweeping package of tax cuts that could provide significant relief to farmers and ranchers.

The goal is to put a final bill on President Donald Trump's desk by Christmas. The House voted Monday to go to conference with the Senate to reconcile differences between a bill that passed the House in November and another that the Senate passed early Saturday. As of Tuesday, Senate Majority Leader Mitch McConnell, R-Ky., had yet to schedule a vote to begin the negotiations.

House Ways and Means Chair Kevin Brady, R-Texas

House Ways and Means Chairman Kevin Brady, R-Texas, rejected the idea of accepting the Senate bill as-is. But many experts expect the final bill to track closely with the Senate bill, especially since many of the provisions were modified before the final floor vote to bring them in line with what the House GOP wants.

Patricia Wolff, a senior director of congressional relations for the American Farm Bureau Federation, said the Senate bill appears broadly beneficial to agricultural producers.

"The vast majority of farmers pay as individuals and there are lower rates and bigger brackets. The deductions and credits that farmers care most about are continued in this bill, and there is a big bump in expensing," she said. "The combination of provisions holds promise for farmers and ranchers having lower taxes."

The House conferees will include Rep. Kristi Noem, R-S.D., a member of the Ways and Means Committee, who has championed agricultural interests.

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In an interview off the House floor Tuesday, Noem acknowledged that the Senate's pass-through provisions could be better for farms. "We knew our provision wasn't finished, so we'll have that conversation," She also said she hadn't given up on totally repealing the estate tax.

The House would repeal it after 2023; the Senate bill would double the exemption, currently about $11 million for a couple, and that increase would sunset after 2025 along with the rest of the individual tax provisions in the Senate bill.

Brady on Tuesday told *Agri-Pulse* that the pass-through provisions would be under discussion in conference committee. but he said the Senate bill "had some strengths to it." He said negotiators would be looking into "how we can improve on both structures," referring to the House and Senate provisions.

Here's a look at how the Senate and House bills compare on key agriculture issues:

PASS-THROUGHS

The best: Senate.

Under current law, business income from sole proprietorships and S corporations is taxed at individual rates which range from 10 percent to 39.6 percent. The House and Senate bills both seek to cut pass-through taxes but they take very different approaches.

Except at low income levels, the Senate bill clearly appears to be the winner for farms, according to an updated analysis by farm accountant Paul Neiffer of CliftonLarsonAllen in Yakima, Wash. The Senate bill would lower taxes to farmers in every tax bracket. In many cases, the House bill would actually result in a tax increase.

The analysis accounts for the tax rates in each bill and the Senate's 23 percent deduction, but doesn't account for other changes in tax law, including the removal of deductions.

The House bill creates a new top rate of 25 percent for the 30 percent of pass-through income that would be considered return on capital. There also would be a new, phased-in bottom rate of 9 percent.

The Senate bill leaves pass-through income subject to individual rates, but creates a new 23 percent deduction, dubbed "199A." For taxpayers with income exceeding $500,000, the deduction would be capped at 50 percent of wage expenses. The deduction is intended to keep small businesses on a level playing field with C corporations, which would see their top tax rate drop from 35 percent to 20 percent under both bills. New individual tax rates in the Senate bill would range from 10 to 38.5 percent.

According to Neiffer's analysis:

- After $77,000 in taxable income, Farmers John and Mary would currently pay $2,275 in tax on his or their next $10,000 in earnings. **Under the Senate bill, however, they would pay just $1,733 more.** The House is even better at that level: The tax on the $10,000 would be just $1,200.
- At higher levels, the Senate bill is far better than the House or current law. The House bill, in fact, could actually raise taxes.

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- After $90,000, the farm would pay $1,733 in tax on the next $10,000, compared to $2,500 under the House bill and $2,275 under current law.
- After $120,000, the extra tax is $1,925 under the Senate bill, compared to $2,275 under current law. **After $260,000, the tax on an additional $10,000 would still just be $1,925 under the Senate bill.** Under current law, it would be $3,003 under the Senate bill and $3,200 under the House bill.

The Senate pass-through deduction was sharply increased, from 17.4 percent, before the final floor vote, and that change made a meaningful difference. With the original 17.4 percent deduction, the tax on an extra $10,000 after $260,000 would have been $2,065, not $1,925, according to Neiffer's analysis.

Neiffer says the deduction "may also apply to self-rental income earned by farmers who rent their ground to their farm operation. "We do not have any formal guidance on this, however, the actual code section says 'effectively connected with the conduct of a trade or business'," he writes.

It's important to remember that to lower the overall cost of the bill all of the Senate's individual tax provisions would expire after 2025.

For the few farms organized as C corporations, the tax bills could create a problem. Under current law, there is a 15 percent rate on the first $50,000 in income. That would go away under the new bills. That could result in a tax increase, according to Roger McEowen, an agricultural tax law specialist at Washburn University in Topeka, Kan. "Under current law the tax owed on $75,000 of corporate taxable income is $13,750 while the tax liability under the new law would be $15,000," he writes.

CASH ACCOUNTING

The best bill for agriculture: They are very similar.

Both bills would allow farmers to continue using cash accounting. The House bill increases small business eligibility for cash accounting to $25 million in revenue. The Senate bill would raises the limit to $15 million.

COOPERATIVES

The best: Senate.

Both the House and Senate bills repeal the Section 199 deduction that farmer cooperatives have been using. Co-ops claim about $2 billion in deductions a year, of which an estimated 95 percent is passed onto members, meaning that co-ops retain about $100 million a year.

The House bill does nothing to replace that benefit. But Sen. John Thune, R-S.D., amended the Senate bill to extend the 23 percent pass-through deduction to farmer cooperatives.

The National Council of Farmer Cooperatives, which enlisted the support of other farm groups on a series of letters to Capitol Hill, was relentless in lobbying the Senate for replacement of the Section 199 benefit.

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NCFC initially didn't believe the Senate provision went far enough. But the group decided on Tuesday, after further analysis and discussions, that the Senate bill would "work for cooperatives and their members so long as technical clarifications are incorporated to reflect the unique structure of co-ops," said Chuck Conner, president and CEO of NCFC.

The Joint Committee on Taxation estimates that the provision would provide co-ops just $100 million over 10 years, or $10 million a year.

COST RECOVERY

The best: Senate, if permanence is the goal.

The Senate bill permanently increases the Section 179 allowance to $1 million, with phaseout at $2 million, but continues to limit the provision to new equipment. Both amounts are indexed to inflation.

The House bill would temporarily increase the Section 179 expensing allowance - for both new and used equipment - to $5 million with a phaseout at $20 million. Those amounts would be indexed for inflation, but the provision expires at the end of 2022.

Under current law, farms can expense up to $500,000 of the cost of new equipment, buildings, breeding livestock and dairy cows. The allowance doesn't apply to used equipment and is phased out when the purchases exceed $2 million.

Both bills would allow full depreciation of qualified property through 2022. Under the bonus depreciation provision in current law, businesses can write off 50 percent of newly acquired equipment in 2017. That allowance falls to 40 percent in 2018 and 30 percent in 2019.

ESTATE TAX

The best: House.

The House bill doubles the estate tax exemption, currently about $11 million for a couple, and repeals the tax after 2023. The Senate bill also would double the exemption but the higher exemption would expire after 2025 along with the other individual tax provisions in the bill. The expiration would leave farmers with continued uncertainty.

The Senate provision is less of a political target: The House provision came under heavy criticism from Democrats, who decried it as a giveaway to wealthy families. Democrats largely ignored the Senate version.

INTEREST DEDUCTABILITY

The best: Bills are similar.

Maintaining full expensing for interest costs has been a major priority for farm groups, and they've succeeded in protecting it.

The House bill would allow farms and small businesses with less than $25 million in revenue to continue to fully expense interest payments.

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The Senate bill has a lower revenue threshold - $15 million - but cattle feeders won a provision that would allow producers of any size to fully expense their interest costs if they agree to a longer depreciation schedule. Otherwise, expensing is limited under both bills to 30 percent of taxable income.

LIKE-KIND EXCHANGES

The best: Bills are the same.

Both bills would continue the Section 1031 exchanges but restrict them to real property. That's not considered a big deal because of the expansion of Section 179 expensing, so long as it isn't allowed to expire.

STATE AND LOCAL TAXES

The best: Bills are same.

Under current law, farmers can deduct property taxes as an expense on Schedule F. State and local income taxes can be deducted on their individual returns. Both the House and Senate bills would continue to allow property taxes to be expensed on Schedule F, but both versions would end the itemized personal deductions for state and local income taxes. A personal deduction for property taxes, up to $10,000, would continue under both bills.

How the repeal of state and local income tax deductions would affect farmers depends entirely on where they live.

Seven states, including Florida, South Dakota, Texas and Washington have no income tax, so farmers there won't be affected. In other states, top marginal rates can vary from 3 percent in Pennsylvania to as high as 13 percent in California, according to the Tax Foundation.

Several major farm states also have relatively high rates: nearly 10 percent in Minnesota, 9 percent in Iowa and 7 percent in Nebraska.

To view a side-by-side comparison of the two bills, click here.

Peterson preps new farm bill ideas and reminds others of pitfalls

When Rep. Collin Peterson recently traveled home to his rural western Minnesota district, he opened his briefing by telling farmers that the number-one thing to get done in a new farm bill is to help cotton producers. The livestock, corn, soy, wheat and sugar beet producers – who are thousands of miles from a cotton field - seemed a bit perplexed.

"Well, if you want to get a bill, the Chairman's got the biggest cotton district," he said in reference to House Agriculture Committee Chairman Mike Conaway of Texas. "We have to make this work for cotton."

Make no mistake. Peterson, the ranking Democrat on the committee, also wants the bill to improve programs that impact his district's poultry and livestock, conservation, commodity and

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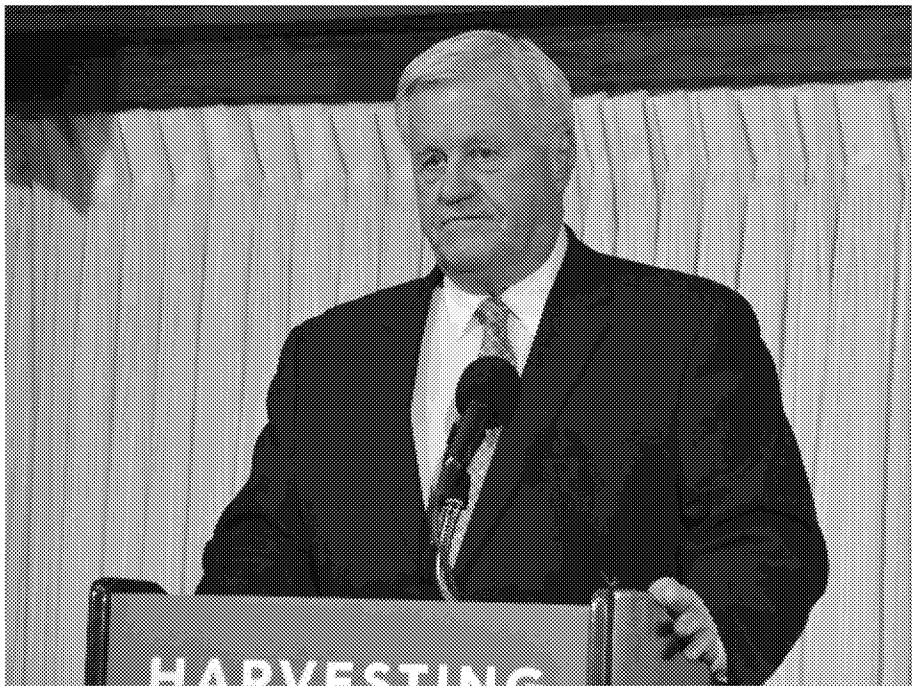
rural interests. But he's also thinking "big picture" about the types of changes that will either pave the way for final passage of a new bill in 2018 or kill it.

During a farm bill panel at the Missouri Farm Bureau's annual meeting and in an exclusive interview with *Agri-Pulse* earlier this week, he made it clear that **farmers need to remember the lessons of the past farm bill, which included the first-time-ever farm bill defeat on the House floor in 2013.** The vote failed after Florida GOP Rep. Steve Southerland offered an amendment which would have allowed states to increase work requirements for citizens to receive Supplemental Nutrition Assistance Program (SNAP) benefits, commonly called food stamps.

Peterson maintains that the reason the last farm bill took so long to get done is because of that amendment.



Rep. Collin Peterson, D-Minn. spoke at the Agri-Pulse Farm Bill Summit earlier this year.

"If you bring in the work requirements, there won't be a farm bill. I guarantee it," Peterson emphasized, while noting that he is not against provisions that are currently written in law to require able-bodied adults to work after three months of benefits if they can. **"The people who have been getting around the work requirements are the governors who issue waivers."**

"Conaway claims, and Glenn Thompson, who chairs the nutrition subcommittee, told me they are not going to allow anyone to blow it up. We'll see," Peterson added. "Having experienced this once, I'm nervous."

Peterson says he's also nervous about potential farm bill amendments to cut crop insurance, but he doesn't want to spell out why and give his critics advice.

"The one thing I'm worried about on the floor is crop insurance," he says of the upcoming farm bill debate. "There will be a sugar amendment, but I think we have that defeated."

He says preparations on the bill are moving quickly.

"We are probably going to have an initial draft together in December" that will be available for the committee members to discuss, he said. "So, we could get started in January with marking up the bill. It's just a question of when we have floor time."

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Unlike the historic changes in the last farm bill where direct payments were eliminated in exchange for new, more variable commodity programs, Peterson predicts there won't be major changes in the next package. The main reason: There's not going to be any money.

Two areas that he's focused on fixing deal with dairy and the Conservation Reserve Program.

Peterson says he's going to try to fix the Margin Protection Program (MPP) for dairy producers, but he doesn't think "anyone is going to use it." He thinks a new dairy insurance product and improvements in the Livestock Gross Margin program for dairy are more viable options.

"If I had my way, we'd just get rid of it," Peterson said about the MPP. "Unless they (farmers) are sure they are going to make money they aren't going to buy in. And that's not how it should work." Plus, he said the Farm Service Agency did a "terrible job" with implementation. "Some didn't explain it at all, some of them didn't even let people know it existed. Some badmouthed it."

Peterson said one of the reasons he opposed an insurance agent delivery option in the past is because, in dairy country, there aren't really that many agents. Now that there are policies for alfalfa, there is more market penetration, he says.

"I've talked to the insurance industry about whether or not they are interested in selling MPP. They seem to be. So, we are looking at that."

Another area that Peterson sees as ripe for improvement is the Conservation Reserve Program (CRP). He'd like to lift the current 24 million acre cap – which generated almost $6 billion in savings for the last farm bill -- and increase it to 32 million acres. He's confident that he can increase the cap by simplifying program options and limiting the payment rate.

"We still have a lot of land that shouldn't be farmed. And we have land that shouldn't be in the program. We also have stuff going in that's overpriced," Peterson explains.

"I had a farmer from my home county who lost 400 acres that he's been farming for 40 years because the three brothers that had it got more money out of the CRP program than he could pay rent. That's not right."

As *Agri-Pulse* has previously written, Peterson advocates for a cap that would limit CRP rental rates to no more than 80 percent of the prevailing rental rates. "It's not perfect but will help" the situation that many farmers face.

He also wants to simplify the program and get the Environmental Benefits Index (EBI) "under control," although he admits he is still reviewing options and trying to figure out how to do so. And he's no fan of continuous enrollment in the CRP and the state and regional practices that get attached.

"Why are we using federal money to let somebody else do their priority? I don't agree with that. I think there are something like 58 different programs under continuous sign-up. We just have to get rid of some of them," Peterson says.

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ERS report shows shrinking pool of farm program payment recipients

A Department of Agriculture report details changes in farm program payment recipients over a 24-year period, and analysts wonder if it could wedge its way into the debate over a new farm bill.

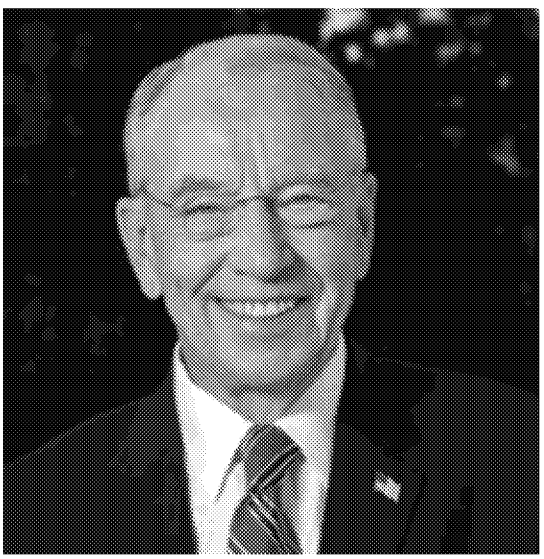
The report – The Evolving Distribution of Payments From Commodity, Conservation, and Federal Crop Insurance Programs – was published last week by USDA's Economic Research Service. In it, authors Jonathan McFadden and Robert Hoppe observe that large farms with gross cash farm income of $1 million or more (in inflation-adjusted 2015 dollars) received 41 percent of farm program payments in 2015, up from 23 percent in 1991. There's also a greater diversity of payments: Commodity programs in 1991 accounted for 89 percent of farm program payments; by 2015, conservation payments and crop insurance premium subsidies were eating up a bigger share, driving commodity program payments down to 43 percent of the total.

That larger farmers are receiving more in payments is not necessarily a surprise; they have a greater rate of program participation, have more risk due to their greater level of output, their yields have increased dramatically - sometimes doubling - since 1991 and big farmers can gobble up available land to expand their operations more easily than their smaller counterparts.

But there are those who don't see the report that way. They see the nation's large producers on the receiving ends of taxpayer funds that should either be sent out to smaller producers or not sent out at all.

"When, as the ERS report reveals, the top 10 percent of payment recipients have for the past decade had household incomes ranging between a half million and a million dollars a year, the need for reform could hardly be clearer," Ferd Hoefner, senior strategic advisor with the National Sustainable Agriculture Coalition, told *Agri-Pulse*.

"More importantly," he added, "continuing to force taxpayers to subsidize every last acre and bushel on mega-farms is destroying our nation's commitment to widely dispersed family farms and new farmer opportunity."


Chuck Grassley, R-Iowa

Hoefner and others who agree with him have an ally on the Republican side of the Senate Agriculture Committee: Iowa's Chuck Grassley.

"I'm not a fan of unlimited subsidies going to the largest farmers," Grassley said. He noted he's never made an effort to limit the size of a farm, but "at some point, farms are big enough and shouldn't continue to get unlimited federal dollars."

During the last farm bill process, Grassley pushed a proposal that would have capped farm program payments at $250,000 and tightened rules allowing non-farming "managers" to work their way into the

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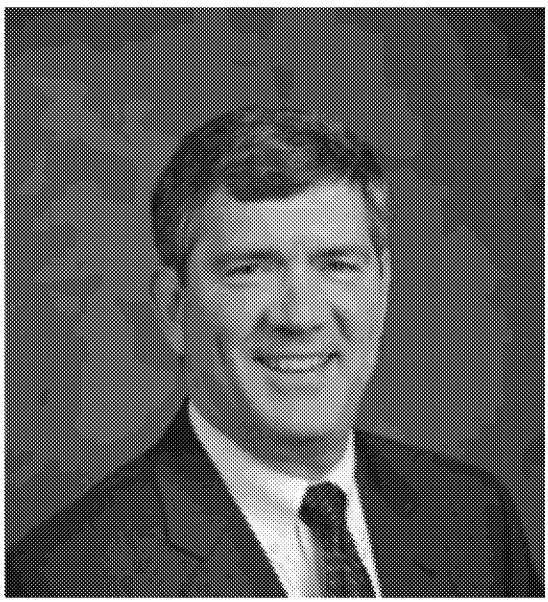
program. Grassley told reporters on Tuesday that he still supports that approach and will try to include it in the upcoming farm bill.

"Some of our largest farmers need to temper their expectation for taxpayers dollars," Grassley said. "I'm not going to give up until I get this limit put on what a single farm entity can get under all these programs."

Sam Willett, senior director of public policy with the National Corn Growers Association, said he expects a payment limit conversation to be part of the upcoming farm bill debate, just as there has been when drafting previous bills.

"The debate will be similar to ones we've had in the past," Willett told *Agri-Pulse*. "It will be about whether or not this merits a further tightening of payment limits. We argue that should not be the case, but others will disagree with us."

Willett said it's hard to say how a debate on payment limits would go in the current legislative climate, especially given the number of members of Congress who have never debated a farm bill. Budgetary constraints could prompt those seeking tighter payment limits – the current cap is $125,000 per recipient, but several managers can receive payments from different parts of the same farm- to seek further restrictions.



Sam Willett, NCGA

But Willett says those targeting this issue need to keep something in mind.

"A dollar of government payments does not mean a dollar of net benefit to farmers," Willett said, specifically mentioning conservation programs that require some producer investment as an example.

"All the signs indicate that some of the traditional critics of the farm bill are going to zero in on some of the large operators, and I don't think anybody should be surprised by that," Willed added. "We have some education to do."

Dicamba in 2018: Care must be taken, manufacturers tell retailers

As if the 2016 and 2017 growing seasons weren't evidence enough of dicamba's potential to stray from its intended target, representatives of Monsanto and BASF presented ag retailers last week with a laundry list of application mistakes to avoid in 2018.

Ty Witten, Monsanto's lead for Cotton, Specialty Crop, and Seed Treatment Systems, and Gary Schmitz, BASF's regional technical service manager, told a room packed with hundreds of fertilizer and pesticide dealers that their companies are beefing up their educational efforts this winter in an attempt to avoid a repeat of the current growing season, when widespread reports of damage from their low-volatility dicamba herbicides dominated the ag news.

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The occasion was the Agricultural Retailers Association's annual conference in Phoenix, which featured three sessions in three days on dicamba, including a look at what happened in Georgia, where there were no complaints of off-target damage.

The presentations by Witten and Schmitz laid out in detail what the companies learned through interviews with growers and applicators who contacted Monsanto and BASF with questions about why their products – Xtendimax for Monsanto, Engenia for BASF – may have strayed from their intended targets.

Ty Witten, Monsanto

The answer in almost all cases, they said, was a failure to follow the label. Witten, seeking to avoid sounding like he was assigning blame, said, "I want to be real careful here. We're not trying to point a finger and say you did something wrong."

But he and Schmitz also said that based on their interviews with growers and applicators this season, applicators had not followed the strict limitations of the label. Witten said that in particular, applicators misunderstood the buffer requirement, which Witten said was there to protect endangered species. **But some growers thought that by following the buffer requirement, they were protecting neighboring crops, when in fact they should not have sprayed because a sensitive crop was downwind.**

Tank mixes were another problem, he said. Despite a clear prohibition against mixing ammonium sulfate (AMS) with Xtendimax, he said 16 percent of applicators who sprayed the product – and 22 percent in Southern states – told Monsanto that they were putting AMS in their tanks.

AMS "will change the profile of this product that could increase the volatility," Witten said.

And Schmitz said that "once you start getting up to 80-90 degrees and greater," AMS can add "up to 20 times more volatility."

Schmitz stressed that a failure to follow any one of the numerous label requirements, which have recently been strengthened by EPA, can significantly increase the chances of drift.

"Even where a customer was trying to do a very good job of managing contamination, sometimes there were these weak links out there," he said.

One weak link involved use of the improper nozzles. **"This is a difficult one for me to understand because we gave away more than 700,000 nozzles," he noted. Yet using the incorrect nozzle can increase drift enormously, he said.**

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"Maybe the information didn't get to the applicator, or in some cases the applicator thought they needed better coverage, or they had some concern about the large droplets that were coming out, but I assure you the number-one step in controlling and managing off-target drift is with the right and proper nozzle," Schmitz said.

Gary Schmitz, BASF

Boom height also has an impact, he said. Raising the spray boom to 48 inches, double the 24 inches specified in the label, will result in 5.6 times more drift, he said.

Monitoring of wind speed is also crucial, Schmitz said. The new label says Xtendimax and Engenia can only be applied when winds are between 3 mph and 10 mph. The previous label allowed up to 15 mph for applications. Yet doubling of wind speed at application can increase drift by 3.4 times, he said.

Schmitz also said that about 69 percent of applications where there was off-target movement came from applications made five weeks after planting. "That's a little later than what we desired," he said. "We want to make sure we're moving that application up earlier."

Both Schmitz and Witten said it's critical to avoid spraying during temperature inversions, when spray droplets can remain trapped between cool air at the soil surface and warmer air above. "A six-fold increase in the amount of off-target movement can happen when you spray during a temperature inversion," Schmitz said. And when spraying during a temperature inversion, there's no way to know where the product will end up moving.

Since most inversions take place when wind speed is below 3 mph, "If you're starting to get close to a situation where you're down to 3 mile an hour winds, and they seem to be fairly light into the evening, you're probably approaching an inversion…, so it might be just a good practice at that point to say, it's time to stop," he said.

In one of the other sessions on dicamba, weed scientist Ford Baldwin, who heads up Practical Weed Consultants in Austin, Ark., and Stanley Culpepper, an extension weed specialist at the University of Georgia, discussed the issues of the past growing season.

Culpepper credited the lack of complaints to a variety of factors, including extensive training where growers told him he had scared "the you know what" out of them. In addition, Georgia's diverse agricultural landscape, which includes dozens of vegetables, helped. Growers in the state have long been aware of their neighbors and don't want to buy a million dollars of watermelons in case their spraying goes awry.

He stressed some of the same points made by the company representatives, telling the ARA audience that just because you comply with one of the label requirements, that doesn't mean you can ignore the others.

With no dicamba complaints in Georgia this year, Culpepper said one of his worries is that "I got some guys that are cocky" who must be reminded of the unpredictability of the product they're working with.

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Echoing Schmitz, who said dicamba is "just one tool to manage weeds," Culpepper said, "We can't rely just on herbicides. We've got to look outside the box. Conservation tillage could be critical."

"We have to be integrated, we have to be intelligent," he said.

Baldwin said more label requirements and education won't fix the volatility problem with the herbicides. But he also conceded that most growers and applicators did not follow the label when applying. "I think most everybody tried," he said.

After the talk, he said, "You can't follow that damn label to the letter of the label. If you're going to look for any nitpicky reason and say, that guy violated the label, you can find that. To me, that does not explain a landscape effect," where soybeans were affected uniformly across large areas.

US seeking to push WTO away from protectionism at ministerial

The World Trade Organization will convene this Sunday in Buenos Aires for its 11th ministerial meeting and the U.S. will be taking a clear message on agriculture: The WTO, which includes every major trading country, needs to find a new path forward to improve global trade.

There are still WTO members – especially developing countries – trying to further insulate themselves from global trade and urging WTO acceptance of their protectionist practices, but that has to change, said Jason Hafemeister, associate administrator of USDA's Foreign Agricultural Service, who sat down for an interview with *Agri-Pulse*.

"There are still too many high tariffs, there are still too many trade-distorting subsidies," Hafemeister said. "Can the WTO create an agenda to attack these problems? That's a challenge for the WTO."

Jason Hafemeister, USDA FAS

Perhaps one of the biggest irritants to the U.S. are countries like China and India that subsidize domestic production of grains such as corn, wheat and rice in order to build up massive stockpiles.

While President Donald Trump has been extremely critical of the WTO and its methods of resolving disputes between members, his administration has fallen behind efforts begun during the Obama administration to challenge trade barriers in countries like China.

In September 2016, the U.S. Trade Representative announced it was officially challenging China's artificially high prices for wheat, corn and rice. Those supports, the U.S. charged, distort world markets and cause billions of dollars in losses every year for U.S. farmers and exporters.

Subsequently, the USTR under the Trump administration announced it would continue the WTO battle against China's floor prices and stockpiling.

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An Iowa State University study this year estimated that U.S. wheat exporters have lost roughly $700 million in revenue because of China's domestic support programs that far exceed levels allowed for in the WTO.

An initial round of talks between the U.S. and China to hash out the U.S. complaint failed and the U.S. officially requested the WTO form a dispute-settlement panel to adjudicate the issue.

The Trump administration's decision to carry on with the WTO complaint in September elicited immediate praise from U.S. Wheat Associates.

"Trade enforcement is crucial for building confidence in existing and new trade agreements," said USW Chairman Mike Miller in September. **"The Trump administration's actions should send a signal that strong and enforceable trade rules are vital to the United States and to U.S. farmers, specifically."**

Hafemeister said there are no plans yet for U.S. and Chinese negotiators to huddle on the sidelines of the Buenos Aires meeting and discuss the U.S. complaints. The USTR also challenged China in the WTO over the country's failure to import enough wheat, corn and rice to meet its tariff rate quotas. When China joined the WTO in 2001 it agreed to import billions of dollars of agricultural commodities under a system of tariff rate quotas, but those imports never fully materialized.

"There's no negotiation planned with China," he said. "Both of those actions are right now moving through litigation. Of course, you always hope a country would be willing to settle out of court, but right now there's no sign that China's interested in a negotiated settlement."

And now, ahead of the biannual ministerial meeting, U.S. Wheat Associates tells *Agri-Pulse* it is standing behind the Trump administration's agenda.

"USW continues to support the WTO's mission to liberalize trade," spokesman Steve Mercer said. "Looking ahead to the Buenos Aires ministerial, we do not want to see the disciplines in the WTO Agreement on Agriculture weakened by exempting price supports for public stockholding programs run by major agricultural trading nations, especially since some of those same countries are blatantly ignoring their current WTO commitments.

"A binding, enforceable dispute settlement mechanism is critical for U.S. wheat farmers, and we have been very pleased with the Trump administration's aggressive use of the WTO dispute settlement process to make sure countries abide by their WTO commitments in agriculture. It is critical that the Buenos Aires ministerial does not weaken WTO agriculture disciplines or enforcement mechanisms."

But that will be a major challenge for the 22-year-old WTO and its current roster of 164 members, said Hafemeister, who stressed that many countries are having trouble letting go of the failed Doha Development Round of WTO talks.

The Doha Round began in 2001 and stalled in 2008 over proposals to protect developing countries like Brazil, China and South Africa.

"A lot of the difficulties we're having right now are with what you would call emerging countries," Hafemeister said. "Big ag producers who are now starting to ramp up their

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protectionism … Countries who have developed generous subsidy policies to encourage over-production … These are some of the same markets that hold some of the biggest potential for us as export markets."

One of those markets is India and it is expected to propose new WTO rules at the Buenos Aires meeting to allow countries to create stockpiles by setting up minimum support prices.

Hafemeister stressed that this will be opposed by the U.S.

"We cannot be supportive of the pretense of developing countries trying to stockpile grains as an excuse for those types of measure," he said. "On the other hand, we do have some countries that do want to engage in those kinds of policies and are looking for the WTO to approve of those policies - so there's a real fundamental disagreement there."

India has been the most vocal about support for stockpiling, but other supporters include China, Indonesia and the Philippines, he said.

With that issue not likely to succeed, the ministerial promises to result in little or no concrete agreements, Hafemeister said, but stressed the outcome will be nonetheless important if a new tone can be set for future meetings.

"I think the big challenge facing the WTO is reorienting its agenda towards its core function of how do we liberalize trade and open markets. How do we reduce trade distorting measures? That's what the WTO has got to get refocused on and hopefully this meeting will move the organization forward towards that goal."

Canadian ranchers see major payoff from Asian trade deals

Canadian beef and pork exporters have long relied on their U.S. neighbors as solid trading partners, but that relationship has grown increasingly rocky during the contentious renegotiation of the North American Free Trade Agreement.

The uncertainty surrounding the talks and the future of U.S.-Canadian trade has the northern producers looking to Asia, and they like what they see. Canada and China took new steps toward what could be a massive new free trade agreement this week, and Canadian exporters are already counting on increased access to Japan as the Trans-Pacific Partnership (without the U.S.) moves toward ratification.

Canadian Prime Minister Justin Trudeau is visiting China this week and Canadian cattle and swine producers couldn't be happier. When Trudeau sat down with Chinese Premier Li Keqiang, President Xi Jinping and other leaders, a main topic was the prospect of a free trade agreement between the two countries, a development that could translate into a lot more beef and pork exports to the communist nation.

"I look forward to continuing discussions towards a comprehensive trade agreement, which will open up greater opportunities for people on both sides of the Pacific," Trudeau said in a statement after his meeting with Li.

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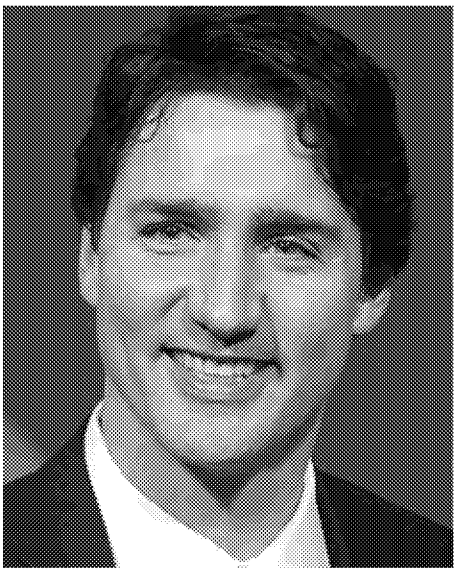
Hopes were high that Trudeau would formally announce the start of FTA talks with China on Tuesday, but that didn't happen, according to Canadian press reports. Trudeau left Beijing for Guangzhou on Tuesday, but International Trade Minister François-Philippe Champagne was ordered to stay in Beijing to continue talks that could still lead to an announcement, according to a report by CBC News.

Canada exports about 587 million Canadian dollars ($463 million) worth of pork per year to China, but that's only frozen product and under tariffs that range between 12 and 20 percent, said Gary Stordy, a spokesman for the Canadian Pork Council.


Canadian Prime Minister Justin Trudeau

"We want to build relationships with the Chinese," Stordy said. "We want the long-term relationships where we can work on branding and providing a safe and tasty product to their consumers."

Canada shipped 314,000 tons of pork to China last year and 234,000 in the first nine months of this year, according to CPC data, and that volume could rise substantially if the two countries work out an FTA and slashed those tariffs, said Stordy.

A tariff-cutting deal with China could be just the edge the Canadians need over U.S. exporters, who just recently gained access to the Chinese market and are making limited sales, said John Masswohl, director of government and international relations for the Canadian Cattlemen's Association.

"If you look at the tariffs … and if you want to ship beef cuts, which is what everyone wants to ship, that's 12 percent," Masswohl told *Agri-Pulse*. "Canada is shipping at 12 percent and the U.S. is shipping at 12 percent … Absolutely, that would be a major objective of ours."

And U.S. ranchers would be jealous.

"China represents 12 percent of the world's export business for beef and that was 0.5 percent five years ago," said National Cattlemen's Beef Association President Craig Uden earlier this year. "There's a huge opportunity there."

One country already with an advantage in China is Australia, which is watching Chinese tariffs gradually fall because the two countries signed an FTA in 2015.

Increased access to China would be especially important to Canada's ranchers if Canadian exports to the U.S. were impacted by a failure to renegotiate NAFTA, said Masswohl.

The NAFTA talks have not imploded yet, but the U.S., Mexico and Canada have reached an impasse over several major U.S. proposals and the prognosis is grim, according to U.S. industry sources involved in the negotiating process.

Masswohl says he's not counting on a success.

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"The thing that I think is on everyone's mind here in Canada is the possibility that the United States could withdraw from NAFTA, which I think is a possibility that we have to take seriously," he said. "If you take that seriously, then we need to have other options."

One of those options is China. Another is Japan. Both the U.S. and Canada export beef to Japan and both North American exporters are subject to steep Japanese tariffs.

Japan agreed under the Trans-Pacific Partnership to cut its beef tariffs from 38.5 percent to just 9 percent for both the U.S. and Canada, but now only Canada is set to reap that reward. One of the first things that President Donald Trump did after taking office was pull the U.S. out of what was supposed to be a 12-member pact.

John Masswohl, CCA

"We'll take the market that the U.S. has been serving to the Japanese … Likewise, I would say with China, we don't see the possibility of the U.S. doing a bilateral with China or anybody in the short term," Masswohl said. "Nobody wants to negotiate with the United States, given their current approach on things."

The U.S. International Trade Commission concluded in an analysis that under TPP, U.S. beef exports would have risen by $876 million a year and U.S. pork exports by $387 million per year. Most of those increases would be due to reductions in Japanese tariffs and other trade barriers.

But Canada and the other TPP nations -- Japan, Mexico, Australia, Vietnam, Brunei, Chile, New Zealand, Peru, Singapore and Malaysia -- are moving ahead without the U.S. and are expected to ratify the deal early next year.

"Our overall advice to the (Canadian) government is that we should finish and implement the TPP amongst the 11 countries without the United States," Masswohl said. "We should initiate a free trade agreement with China … We should make sure that if the U.S. does withdraw from NAFTA, we maintain a free trade agreement between Canada and Mexico."

Likewise, Canadian pork producers also envision taking some of the U.S. market share when it comes to Japan.

"It was a good deal with TPP 12," Stordy said about the pact when the U.S. was still involved. "It's an even better deal with TPP 11."

'People's Christmas Tree' brings holiday spirit to Capitol

After a journey of more than 3,000 miles, the "People's Christmas Tree" is about to come back to life on the West Lawn of the U.S. Capitol.

An 11-year old boy named Ridley Brandmayr from Bozeman, Montana, will throw a switch to light up the 79-foot tall Engelmann spruce Wednesday evening before a crowd that's expected to

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include Sen. Jon Tester of Montana, who represents the state that provided the tree, House Speaker Paul Ryan, Agriculture Secretary Sonny Perdue and Tony Tooke, chief of the U.S. Forest Service, which has been providing the tree for almost 50 years. Festivities begin at 5 p.m.

"It really is a fun ceremony," said Bruce Ward, president of Choose Outdoors, the Denver-based non-profit that worked closely with the U.S. Forest Service to bring the tree to Washington. "It really helps to bring the Christmas spirit to DC."

This truck carried the Christmas tree on its journey to Washington. (Photo: James Edward Mills)

The journey began in the tiny town of Yaak, Montana, within the Kootenai National Forest, near where parts of the Oscar-winning film, "the Revenant," were filmed. That's where the tree, called "Beauty of the Big Sky," was harvested in early November.

Ward, who helped USFS find private-sector sponsors to defray the cost of moving the majestic evergreen, traveled with the tree through "whistlestops" in Montana, where thousands of children turned out with their homemade ornaments to decorate the tree. They also signed holiday greetings on the giant banner that hung from the side of the semi-trailer that carried the tree on its odyssey, which also featured stops in North Dakota, Minnesota, Missouri and Kentucky.

Montana sawyer Pete Tallmadge and his wife Pam get their first look at the US Capitol Christmas Tree in Washington D.C. For more on the tree and related events, go to: http://www.capitolchristmastree.com/

By early this week, the tree was all ready to be illuminated, crowned with a five-foot tall eight-pointed star, made of copper, as a nod to Montana's rich copper mining tradition. It also features a representation of Montana's state flower, the bitterroot.

Ward noted that the lighting ceremony, which is open to the public, is also meant to call attention to the important role the U.S. Forest Service and its 30,000 employees play in managing activities – logging, grazing, recreation – in the more than 150 national forests.

"The Forest Service does a fantastic job," said Ward, who's been involved with bringing the Capitol Christmas Tree to Washington since 2012. "And that's not just with the People's Christmas tree," he said, "but all year long."

News Briefs

AgResource Co. sees stagnant commodity markets. U.S. farmers need to start planning now to survive stagnant commodity markets, agricultural economist Dan Basse told an audience at the American Seed Trade Association Tuesday. Basse, president of AgResource Company in Chicago, was appearing at ASTA's CSS & Seed Expo for the sixth straight year. He

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didn't deliver only bad news, but did say that the world economic "order" has shifted to disorder. Central banks are no longer working closely together, and factors such as Brexit, the North Korean situation, regional protectionism and President Donald Trump's unpredictability are all contributing to financial risk and volatility in 2018 and 2019. Speaking of the impact of leaving the North American Free Trade Agreement, Basse said, "I hope it's not true. We'll see Chicago hit badly. These kind of trade negotiations are difficult, and I can only hope that this administration comes to its senses." Basse projected that net farm income, which reached a high of $124 billion in 2013, will come in at $61 billion this year before falling to $56 billion in 2019. It will then slowly make its way back up to $69 billion in 2025, Basse predicted. He said there's not much farmers can do to boost profitability other than becoming better business people and cutting costs where they can. He is advising his clients to try to lock in prices on the futures market – December 2019 corn reached $4.10 bushel on Wednesday, for example – to guarantee profits.

Colombia, Panama free trade agreements are safe. The Trump administration has already insisted on renegotiations for the North American Free Trade Agreement (NAFTA) and the U.S. pact with South Korea (KORUS), but there is no sign that free trade agreements with Colombia and Panama are in jeopardy for the same treatment. That's according to USDA Undersecretary for Trade and Foreign Agricultural Affairs Ted McKinney, who visited both countries last week and spoke to reporters in a teleconference from Panama. "I think the free trade agreements have been a good thing for all of the countries – the U.S., Colombia and Panama," McKinney said. "I've not received any questions nor am I aware of any redo of the free trade agreements with Colombia and Panama." McKinney also visited Brazil where he discussed the ban on imports of the country's fresh and chilled beef. The product was banned in June after U.S. inspectors found "repeated import violations such as abscesses, ingesta and unidentified foreign material (in) raw intact beef product" from eight Brazilian packing plants. McKinney said he reaffirmed that the USDA now does NOT consider Brazil's meat safety protocols to be equivalent to U.S. standards. However, he said the situation can be fixed. As to whether Brazil would succeed and eventually resume exporting to the U.S., he added, "I think it's just a matter of when, not if."

What's hot from the nation's chefs. The National Restaurant Association released its annual survey of 700 professional chefs – members of the American Culinary Federation (ACF) on Tuesday, designed to predict food and beverage trends at restaurants in the coming year. The annual "What's Hot" list gives a peak into which food, beverages and culinary concepts will be the new items on restaurant menus that everyone is talking about in 2018. According to the survey, menu trends that will be heating up next year include doughnuts with non-traditional filling, ethnic-inspired kids' dishes, farm/estate-branded items, and heritage-breed meats. Trends that are cooling down include artisan cheeses, heirloom fruits and vegetables, and house-made charcuterie. For the latest report, click here.

Farm Hands on the Potomac...

Glen R. Smith was confirmed by the Senate Tuesday as a member of the Farm Credit Administration Board. Smith owns a family farm in western Iowa that includes 2,000 acres of corn and soybeans. He also is the co-founder of Smith Land Services, a company that specializes in farm management, land appraisal and farmland brokerage services.

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Nebraska Gov. **Pete Ricketts** named **Steve Wellman** as the new director of the state's Department of Agriculture. Wellman, a fourth-generation farmer and a former president of the American Soybean Association, replaces **Greg Ibach**, who is now undersecretary for marketing and regulatory programs at USDA.

The Environmental Protection Agency hired **Molly Block** as a press secretary. The University of Michigan alum previously held that position with the House Natural Resources Committee under Chairman **Rob Bishop**, R-Utah. EPA has also taken on **Kelsi Daniell** as press secretary for Administrator **Scott Pruitt**. She had been working as scheduling director for Sen. **John Boozman**, R-Ark.

Mary-Louise Wagner is the new minority staff director for the Senate Energy and Natural Resources Committee under the panel's ranking Democrat, **Maria Cantwell** of Washington. Wagner previously was a senior policy adviser at the Department of Energy. She is replacing **Angela Becker-Dippmann**.

Agriculture Secretary Sonny Perdue named five pork producers to serve three-year terms on the National Pork Board, the 15-member body that administers the pork checkoff program. They are: **Brett Kaysen**, Nunn, Colo.; **Steven R. Rommereim**, Alcester, S.D.; **Scott Phillips**, Drexel, Mo.; **Heather Hill**, Greenfield, Ind.; and **Deb Balance**, Fremont, N.C. You can find a full list of board members on the National Pork Board's website.

Land O'Lakes Inc. promoted **Beth Ford** to chief operating officer in charge of the co-op's businesses, and **Brad Oelmann** to COO for Land O'Lakes Services. Ford joined Land O'Lakes in 2011 from International Flavors and Fragrances where she was responsible for optimizing the company's global manufacturing infrastructure. She will continue profit-and-loss responsibility for both the Purina Animal Nutrition and the Land O'Lakes Dairy Foods businesses and retain her previous responsibilities for system-wide supply chain operations and IT. At the same time, her role will expand to include responsibility for the WinField United business. Oelmann was named executive vice president for member relations and business development services this past spring. His new role will bring together all services Land O'Lakes offers to its co-op members. In addition, Oelmann will add overall responsibility for Land O'Lakes SUSTAIN, Crop Nutrients, FLM Harvest and Government Relations. Both promotions are effective with the new year.

The National Biodiesel Board recently voted to fill eight board openings. The new members are: **Kent Engelbrecht**, ADM; **Ron Heck**, Iowa Soybean Association; **Steve Nogel**, Ag Environmental Products; **Ryan Pederson**, North Dakota Soybean Council; **Harry Simpson**, Crimson Renewable Energy LP; **Paul Soanes**, RBP Port Neches LLC; **Robert Stobaugh**, Arkansas Soybean Promotion Board; and **Chad Stone**, REG Inc. The board also re-elected the current slate of officers with **Kent Engelbrecht** serving as chairman, **Mike Cunningham** as vice chairman, **Greg Anderson** as treasurer and **Chad Stone** as secretary.

Mark Sanborn has returned to USDA, this time as a senior adviser to USDA's Rural Development program. He formerly ran the Agriculture Department's Rural Business co-op service. Most recently, he handled public affairs for the Transportation Department's Pipelines and Hazardous Materials Safety Administration. He also was the New Hampshire political director in the Trump for President campaign.

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Jeremy Freking has started a new job as outreach and operations director with the Ag Development Division at the South Dakota Department of Agriculture. He previously served as the executive director and CEO at the South Dakota Soybean Research and Promotion Council and the South Dakota Soybean Association.

Kent Wilson joined Nestle as manager for policy and public affairs. He most recently managed state legislative activities in the Mid-Atlantic and New York for Target after spending a decade lobbying for General Mills. Earlier in his career, he worked for Michael Torrey Associates and he lobbied for the Grocery Manufacturers Association.

John Zeloski is settling into his new role as director, Mazuri Exotic Animal Nutrition with Purina Mills. He's returning to Purina after spending six years as vice president, marketing, with Rabo AgriFinance.

Mark Jirik has been selected as the next president of the Northern Crops Institute. He's replacing **Mark Weber**, who's retiring at the end of 2017 after leading NCI for the past six years. Jirik brings to the job more than 17 years of experience in commodity merchandising and commercial management at Cargill. Fargo, North Dakota-based NCI conducts educational and technical programs that expand and maintain markets for northern-grown crops.

Farmworker Justice has registered **Adrienne DerVartanian,** the group's director of immigration and labor rights, to lobby on behalf of the organization on a variety of issues, including the Agricultural Guestworker Act of 2017, according to Senate records.

The Japanese government has awarded the late **Clayton Yeutter** one of its highest honors, the Grand Cordon of the Order of the Rising Sun, for his efforts to strengthen economic relations with Japan while serving as U.S. Trade Representative from 1985-1989. Yeutter's wife, **Cristena**, accepted the award at a reception last week at the Japanese Embassy in Washington. Yeutter, a former U.S. agriculture secretary and a one-time chairman of the Republic National Committee, died on March 4, 2017, at the age of 86.

Best Regards,

Sara Wyant

Editor

Copyright Agri-Pulse Communications, Inc. All rights reserved. Reproduction or distribution in any form is prohibited without consent from Editor Sara Wyant, Agri-Pulse Communications Inc., 110 Waterside Lane, Camdenton, MO. 65020. Phone: (573) 873-0800. Fax: (573) 873-0801. Staff: Managing Editor Daniel Enoch; Deputy Managing Editor Spencer Chase; Senior Editor Philip Brasher; Senior Trade Editor Bill Tomson; Associate Editor Steve Davies; Contributing Editor Jonathan Harsch; Contributing Editor Jim Webster; Contributing Editor Ed Maixner; Editorial Coordinator: Sandra Cowherd; Director of Marketing: Allan R. Johnson; Administrative Assistant: Sandi Schmitt; Marketing Manager: Jason Lutz; Assistant Marketing Manager: Paige Dye. A one-year subscription (48 issues) is $667.00. To subscribe, send an e-mail to: Sara@Agri-Pulse.com, or visit: www.Agri-Pulse.com.

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Message

From: Ford, Hayley [ford.hayley@epa.gov]
Sent: 11/14/2017 11:11:07 PM
To: Sands, Jeffrey [sands.jeffrey@epa.gov]; Dravis, Samantha [dravis.samantha@epa.gov]; Gunasekara, Mandy [Gunasekara.Mandy@epa.gov]; Bennett, Tate [Bennett.Tate@epa.gov]
CC: Hupp, Millan [hupp.millan@epa.gov]
Subject: RE: Meeting Request- National Corn Growers Association President

Jeff – Do you want to respond directly to Colleen below and let her know that as the Administrator's Ag Advisor, you would be more than happy to meet with Kevin? Then you can let this group know when it's happening and if they should sit in.

Thanks!

Hayley Ford
Deputy White House Liaison and Personal Aide to the Administrator
Environmental Protection Agency
ford.hayley@epa.gov
Phone: 202-564-2022
Cell: Ex. 6

From: Sands, Jeffrey
Sent: Tuesday, November 14, 2017 6:01 PM
To: Ford, Hayley <ford.hayley@epa.gov>; Dravis, Samantha <dravis.samantha@epa.gov>; Gunasekara, Mandy <Gunasekara.Mandy@epa.gov>; Bennett, Tate <Bennett.Tate@epa.gov>
Cc: Hupp, Millan <hupp.millan@epa.gov>
Subject: RE: Meeting Request- National Corn Growers Association President

Thanks Haley.

Ex. 5 Deliberative Process (DP). I can meet with Kevin, NCGA, and would welcome anyone from this team to join.

From: Ford, Hayley
Sent: Tuesday, November 14, 2017 3:20 PM
To: Dravis, Samantha <dravis.samantha@epa.gov>; Gunasekara, Mandy <Gunasekara.Mandy@epa.gov>; Sands, Jeffrey <sands.jeffrey@epa.gov>; Bennett, Tate <Bennett.Tate@epa.gov>
Cc: Hupp, Millan <hupp.millan@epa.gov>
Subject: FW: Meeting Request- National Corn Growers Association President

Ex. 5 Deliberative Process (DP)

Let me know your thoughts. Thanks!

Hayley Ford
Deputy White House Liaison and Personal Aide to the Administrator
Environmental Protection Agency
ford.hayley@epa.gov
Phone: 202-564-2022
Cell: Ex. 6

From: Colleen Willard [mailto:willard@ncga.com]
Sent: Thursday, November 09, 2017 2:12 PM
To: Pruitt, Scott <Pruitt.Scott@epa.gov>
Subject: Meeting Request- National Corn Growers Association President

Good afternoon!

I am hoping to schedule a meeting for National Corn Growers Association President, Mr. Kevin Skunes, and Administrator Pruitt. Mr. Skunes is available after 10:00 am on December 7th and before noon on December 8th. Administrator Pruitt has indicated to Mr. Skunes his desire to meet, so please let me know if there is an agreeable date/time.

Best,
Colleen

Colleen M. Willard
Director, Public Policy
National Corn Growers Association
20 F Street NW, Suite 600
Ex. 6 Direct
willard@ncga.com

The information in this email, and any attachments, is intended by the National Corn Growers Association for the use of the named individual or entity to which it is addressed and may contain information that is privileged, proprietary, copyrighted, trademarked, etc. or otherwise confidential. It is not intended for transmission to, or receipt by, any individual or entity other than the named addressee (or a person authorized to deliver it to the named addressee), except as otherwise expressly permitted in this electronic mail transmission. If you have received this communication in error, please delete it without copying or forwarding it, and notify the sender of the error by reply email.

Message

From: Ginah Mortensen [mortensen.ginah@epa.gov]
Sent: 1/19/2018 6:01:21 PM
To: National Agriculture Compliance Assistance Center [agcenter@lists.epa.gov]
Subject: [agcenter] Ag News from EPA's Ag Center

Here's the latest news from EPA's National Agriculture Center -- we hope you'll find items of interest that will be useful to you and your clients. We encourage you to forward this email to others who may be interested.

This compilation of ag-related news items from EPA HQ and Regional offices is being sent to you, at your request, to notify you that new information has been added to the EPA agriculture web site https://www.epa.gov/agriculture

Below, please see the list of new items on the Ag Center's Newsroom page.
To view the entire text of the News items go to:
https://www.epa.gov/agriculture/agriculture-newsroom

January 17, 2018
-- CERCLA and EPCRA Air Emissions from Agriculture
Due to a recent court decision, farms (including ranches, livestock operations and/or animal operations) will soon be required to report hazardous substance air releases from animal waste under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) when they release hazardous substances from animal waste in amounts greater than/equal to their reportable quantity within a 24-hour period. The purpose of these fact sheets and FAQs is to provide an overview and basic information for those who are impacted by this new requirement.

If you have any questions, please contact the Environmental Protection Agency via the information provided below:
-- Visit https://www.epa.gov/animalwaste for guidance and access to the continuous release reporting forms (including new factsheet)
-- Email comments or suggestions on guidance materials to: CERCLA103.guidance@epa.gov
-- Regional Contacts: https://www.epa.gov/epcra/cr-erns-regional-contacts
-- Call with questions: 1-800-424-9346

January 12, 2018
EPA Hurricane Maria Update for January 12, 2018: EPA Ensures Proper Disposal of 65,000 Containers of Hazardous Household Waste in Puerto Rico

January 9, 2018
-- U.S. EPA announces $3 million available for locally focused environmental education grants
-- USDA Task Force on Agriculture and Rural Prosperity Release Recommendations to Revitalize Rural America

January 4, 2018
-- EPA awards $681,343 to Ohio State University for research to improve water quality in ecosystems

December 26, 2017
-- Denial of Petition To List Concentrated Animal Feeding Operations Under Clean Air Act

December 21, 2017
-- EPA Announces Opportunity to Nominate Additional Experts to Serve as Ad Hoc Members for the FIFRA Scientific Advisory Panel Reviewing Physiologically-Based Pharmacokinetic (PBPK) Modeling
-- Pesticides; Agricultural Worker Protection Standard; Reconsideration of Several Requirements and Notice About Compliance Dates

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The Ag Center sponsors information for more than 60 Topics on the EPA agriculture web site. To view the entire list of Topics go to:
https://www.epa.gov/agriculture/agriculture-programs-practices-and-topics-interest

Thank you for your interest in the Ag Center. We welcome your feedback at agcenter@epa.gov

For more information contact the Ag Center:
Ginah K. Mortensen, Director
National Agriculture Center
U.S. Environmental Protection Agency
https://www.epa.gov/agriculture

Message

From: Ford, Hayley [ford.hayley@epa.gov]
Sent: 10/26/2017 2:22:30 PM
To: Fugh, Justina [Fugh.Justina@epa.gov]
CC: Sands, Jeffrey [sands.jeffrey@epa.gov]; Munoz, Charles [munoz.charles@epa.gov]
Subject: Ethics Discussion--Jeff Sands
Attachments: Jeff M Sands Resume.pdf

Justina,

Jeff Sands (resume attached) came on as an AD appointment effective 10/15. He was just converted to Schedule C and that will become effective 10/29. Can you reach out to him (copied here) and set up an ethics conversation ASAP? He also needs to sign his pledge and do the financial disclosure. Perhaps you can have him sign the pledge when you meet.

He is starting to be pulled into things and needs to have this conversation very soon.

Thank you!

Hayley Ford
Deputy White House Liaison and Personal Aide to the Administrator
Environmental Protection Agency
ford.hayley@epa.gov
Phone: 202-564-2022
Cell: Ex. 6

Jeff M. Sands

Ex. 6 • Ex. 6 • Ex. 6

PROFESSIONAL ACHIEVEMENTS

Manager, Federal Government and Industry Relations, Syngenta, Washington, DC 2015-2017

- Drive federal policy that facilitates grower choice and adoption of biotechnology and crop protection tools that allows them to maximize production while preserving valuable natural resources on their operations
- Design and execute Capitol Hill strategy to preserve Syngenta freedom to operate during ChemChina acquisition and time of heightened anti-trust concern from legislators and external stakeholders
- Represent Syngenta and personal interests on various boards, steering committees, and issue-based coalitions such as the Agricultural Biotechnology Alliance, Agricultural Retailers Association, and the National Cotton Council
- Engage with Syngenta business unit heads and outside stakeholders to ensure business focus of policy pursuits such as Farm Bill, FIFRA,PRIA, USDA PART 340, and GM Disclosure
- Correspond with members of the press to communicate Syngenta perspective on pending/passed legislation and agency activity
- ***Director, SyngentaPAC , $250,000 per cycle*** lead and coordinate Syngenta politcal strategy including budgeting for candidate support, communications, grassroots, and hosting and attending events

Director of Public Policy, Agricultural Retailers Association, Washington, DC 2012-2015

- Represent 10,000 plus individuals in the agricultural retail industry on their policy concerns relating to USDA farm programs, Precision Agriculture including UAV usage, tax, trade, financial services, conservation, energy, rural development and environmental policy
- Work to build personal relationships with Members of Congress, staff, and agency officials in helping to continually improve association influence
- Engage and support to state agricultural reatil associations representing similar interests across the country
- Contribute written legislative perspectives for ARA bi-monthly newsletter, website policy updates, and various national publications
- Coordinate issue briefings and accompany membership on meetings with legislators, staff, and agency officials during fly-ins and other DC based activities
- Design and implement ARAPAC strategy including but not limited to: contributions, planning and attending events, co-creation of the ARAPAC's Chairman's Club, and planning of the ARAPAC Golf Tournament

Agricultural Assistant, Congressman Tom Marino, US House of Representatives, Washington, DC 2011-2012

- Assisted in position development on legislation regarding Agriculture, Homeland Security, and Ways and Means issues
- Gathered and organized appropriate information and attended committee meetings and hearings with Member
- Traveled to the Congressional District to speak with constituents on behalf of member concerning proposed agricultural legislation namely dairy policy and Farm Bill
- Participated in meetings with private and public sector entities on behalf of Representative to hear and collect constituent concerns

EDUCATION

Valdosta State University, *Masters in Public Administration* *December 2011*
Valdosta State University, *B.F.A Organizational Communication* *May 2009*
Abraham Baldwin Agricultural College *A.A.S.-Environmental Horticulture* *May 2006*

RELATED ACTIVITES

- President, Agribusiness Club of Washington, DC
- Chairman, Federal Government Relations Working Group, BIO
- Member, Steering Committee of Marino for Congress (PA-10)
- Director, Agricultural Retailers Association and National Ag Aviation Association Board

Message

From: Subramanian, Hema [Subramanian.Hema@epa.gov]
Sent: 11/14/2017 10:53:47 PM
To: Mitschele, Becky [Mitschele.Becky@epa.gov]
CC: LUEHE, DOUGLAS [luehe.douglas@epa.gov]; Magnan, Eric [Magnan.Eric@epa.gov]; Gill, Sonam [Gill.Sonam@epa.gov]; Gillen, Cara [Gillen.Cara@epa.gov]; Yin, Christina [Yin.Christina@epa.gov]; LEVIN, NANCY [Levin.Nancy@epa.gov]; Drake, Kerry [Drake.Kerry@epa.gov]; Ziegler, Sam [Ziegler.Sam@epa.gov]; Sands, Jeffrey [sands.jeffrey@epa.gov]
Subject: RE: Ag FACA
Attachments: FRRCC Membership Grid - January 2017.docx

Hello Becky, I will be the right contact (am in Jeff Sands' shop as of yesterday). There are 8 current members of the FRRCC (see attached). I do not have further info yet re: the other questions, but will follow up as things develop...

---Hema.

Hema Subramanian
Special Assistant to the Agriculture Advisor (detail)
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Phone (202) 564-5041
subramanian.hema@epa.gov

From: Mitschele, Becky
Sent: Tuesday, November 14, 2017 3:30 PM
To: Subramanian, Hema <Subramanian.Hema@epa.gov>
Cc: LUEHE, DOUGLAS <luehe.douglas@epa.gov>; Magnan, Eric <Magnan.Eric@epa.gov>; Gill, Sonam <Gill.Sonam@epa.gov>; Gillen, Cara <Gillen.Cara@epa.gov>; Yin, Christina <Yin.Christina@epa.gov>; LEVIN, NANCY <Levin.Nancy@epa.gov>; Drake, Kerry <Drake.Kerry@epa.gov>; Ziegler, Sam <Ziegler.Sam@epa.gov>
Subject: Ag FACA

Hi Hema,

Do you have any information that you could share about the Ag FACA?

Specifically, how many seats that are up for new people and the timing of the FR announcement?

We might have some people in mind that would be good from Region 9. Please let me know if you are not the right contact.

Thanks,
Becky Mitschele
U.S. EPA Region 9, Water Division
Desk: (415) 972 - 3492
Cell: Ex. 6

Farm, Ranch, and Rural Communities Committee (FRRCC)
01/01/17 – 10/7/18 & 12/7/18**MEMBERSHIP GRID

Name, Title, Affiliation, City and State, Term and Type of Appointment	Point of View	Region	Experience	Basis for Recommendation
Membership as of 2017				
Johnson, Patrick Partner Cypress Brake Planting Co. Tunica, MS Member Since: 6/8/2012 Term Expires: 10/7/18 **Appointment:** REPRESENTATIVE	1. Business/Industry 2. Cypress Brake Planting Co.; National Cotton Council	4	• Commodity production (cotton, rice, corn, soybeans, wheat, and grain sorghum) • Local / rural leadership	Mr. Johnson represents the Cypress Brake Planting Company and the National Cotton Council. Mr. Johnson manages day-to-day operations at his family farm in northwestern Mississippi producing cotton, rice, corn, soybeans, wheat, and grain sorghum. Mr. Johnson has worked with USDA-NRCS to develop conservation plans for his operation and has supervised his farm's participation in multiple projects implementing conservation practices in accordance with EQIP guidelines on over 2,500 acres to improve soil and water quality. Mr. Johnson is a current member of the National Cotton Council's Environmental Task Force and a Producer Delegate to the Council, as well as a graduate of the National Cotton Council's Cotton Leadership Program. In addition, Mr. Johnson serves on the Board of Directors of the Tunica County Farm Bureau and the Delta Council and holds several leadership roles within his local community.
Korson, Phillip President Cherry Marketing Institute Lansing, MI Member Since: 6/8/2012 Term Expires: 10/7/18 **Appointment:** REPRESENTATIVE	1. Business/Industry 2. Cherry Marketing Institute	5	• Specialty crop production	Mr. Korson represents the Cherry Marketing Institute. He has served as Executive Director of the Michigan Cherry Committee since 1988. His experience of working with farms of specialty crop production will allow him to provide a valuable and significant perspective as a committee members on crop production.

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Name, Title, Affiliation, City and State, Term and Type of Appointment	Point of View	Region	Experience	Basis for Recommendation
Logan, Joseph Director of Agricultural Programs Ohio Environmental Council Member Since: 10/7/2014 Term Expires: 10/7/2018 **Appointment:** REPRESENTATIVE	1. Business/Industry 2. National Farmers Union	5	• Farmers Financing • Milk production labor • State and national legislative	Representing the National Farmers Union. Mr. Logan is the past president of the Ohio Farmers Union and he has sat on the Board of Directors of the National Farmers Union, where he served as chairman of the Budget and Audit Committee and vice chair of the Legislative Committee. His experience in USDA's Farm Service Agency is instrumental in advancing the work of the FRRCC.
Martin, Paul Owner/Manager Spear Six Ranch Petaluma, CA Member Since: 6/8/2012 Term Expires: 10/7/18 **Appointment:** REPRESENTATIVE	1. Business/Industry 2. Spear Six Ranch	9	• Dairy production and ranching • Air quality • Environmental regulation	Mr. Martin represents Spear Six Ranch. Mr. Martin has served as a member of USDA's Agricultural Air Quality Task Force and the National Milk Producers Federation Dairy Environmental Task Force. His considerable experience as a dairyman, ranch, and agricultural environmental specialist will be beneficial to serve on the committee.
Noonan, Roger Owner/Manager, Middle Branch Farm New Hampshire Association of Conservation Districts Member Since: 10/7/2014 Term Expires: 10/7/2018 **Appointment:** REPRESENTATIVE	1. NGO 2. National Farmers Union	1	• Livestock production and processing • Commodity production • Organic agriculture	Representing the interest of the National Farmers Union, Mr. Noonan currently provides conservation leadership, guidance, and oversight for ten county Conservation Districts. He is the current president of New Hampshire Association of Conservation Districts and the New England Farmers Union, where his expertise on soil health practices is invaluable to the committee.
Rynning, Robert Owner/Manager Robert & Tim Rynning Farm Kennedy, MN Member Since: 6/8/2012 Term Expires: 10/7/2018 **Appointment:** REPRESENTATIVE	1. Business/Industry 2. Robert & Tim Rynning Farm	5	• Commodity production (barley, canola, wheat, soybeans) • Local/rural leadership	Mr. Rynning represents the Robert & Tim Rynning Farm. He operates a diversified family farm growing barley, canola, wheat, and soybeans near Kennedy, Minnesota. He currently serves as a Producer Director on the Board of Directors for the U.S. Canola Association. He is an instrumental voice serving on the committee.

Name, Title, Affiliation, City and State, Term and Type of Appointment	Point of View	Region	Experience	Basis for Recommendation
Shippentower, Cheryl **Plant Ecologist** **Confederated Tribes of the Umatilla Indian Reservation** **Pendleton, OR** Member Since: 6/7/2012 Term Expires: 10/7/2018 **Appointment:** REPRESENTATIVE	1. Tribal Government 2. Confederated Tribes of the Umatilla	10	• Plant ecology • Botany • Local government	Cheryl Shippentower represents the Confederated Tribes of the Umatilla. She manages ecological restoration and monitoring of range and forestlands on the Umatilla reservation. Her experience conducting daily operations as a plant ecologist will be a valuable asset to the committee.
Teske, Donn President Kansas Farmers Union Wheaton, KS Member Since: 6/7/2012 Term Expires: 12/31/18** **Appointment:** REPRESENTATIVE	1. Business/Industry 2. Kansas Farmers Union	7	• Commodity production (soybeans, grain sorghum, red clover, wheat, oats) • Organic production	Representing Kansas Farmers Union. Mr. Teske serves on the Board of Directors for the National Farmers Union, the USDA Sustainable Agriculture Research and Education North Central Administrative Council, and the Ogallala Commons Advisory Board. His experience in both state and national organizations allows him to share insights from diverse agricultural perspectives. His involvement with the Ogallala Commons Advisory Board, which focuses on economic and environmental quality, will be an asset to the committee.

ED_004126_00000160-00003

Message

From: E&E News [ealerts@eenews.net]
Sent: 2/14/2018 6:45:25 PM
To: Sands, Jeffrey [sands.jeffrey@epa.gov]
Subject: February 14 -- Greenwire is ready

Greenwire -- The Leader in Energy and Environment News

Read today's Greenwire on the web

GREENWIRE

AN E&E NEWS PUBLICATION

GREENWIRE — Wed., February 14, 2018

READ FULL EDITION

1. EPA:

Pesticide company's penalty: From a proposed $4.8M to $150K

A settlement agreement between U.S. EPA and Syngenta Seeds LLC to resolve violations of pesticide regulations at a Hawaii farm includes a civil penalty that's significantly lower than what the Obama administration had sought.

TOP STORIES

2. GRID:

Utilities, NRDC to regulators: Clean energy is inevitable

3. CLIMATE:

'Stop calling one another names' — Murkowski

4. INTERIOR:

Democrats ask Zinke to halt reorganization and provide details

POLITICS

5. NATIONAL MONUMENTS:

Utah lawmaker didn't disclose land when pushing for site cuts

6. CLEAN WATER RULE:

Group keeps threatened CRA challenge on sideline

7. AGRICULTURE:

Farmers 'extremely nervous' about Trump cuts

8. INFRASTRUCTURE:

Trump donates $100K from salary to federal grant program

CONGRESS

9. NATIONAL MONUMENTS:
House panel easily approves bills to create, expand sites

10. FEDERAL AGENCIES:
Panel advances reg reform bill, OPM picks

11. LOBBYING:
Former Murkowski aide's firm signs mining, wind groups

NATURAL RESOURCES

12. ECONOMY:
In a first, outdoor recreation gets a nod in GDP report

13. ENDANGERED SPECIES:
Feds recognize there's a new orangutan in town

14. NATIONAL PARKS:
Denali wants to stop using glacier as lofty loo

15. WILDLIFE:
Elk crashes research helicopter

16. FORESTS:
That box of chocolates is no valentine for trees — report

LAW

17. ENDANGERED SPECIES:
2 men accused of cuddling baby panthers, harassing gators

18. CHEMICALS:
Chemist nearly poisoned water supply, prosecutors say

CLIMATE CHANGE

19. SEA-LEVEL RISE:
Oceans could be more than 2 feet higher by 2100 — study

ENERGY

20. PEOPLE:
Moniz to advise advanced nuclear tech company

21. UTILITIES:
Critics call for TVA chief to resign over lavish aircraft

22. OFFSHORE DRILLING:
Not allowed the mic at BOEM meetings, foes rally instead

FEDERAL AGENCIES

23. PARK POLICE:
Chief backs out of meeting with Dems after fatal shooting

AIR AND WATER

24. AIR POLLUTION:

Utility agrees to phase out coal at Pa. power plant

25. WESTERN WATER:

Calif. agency could try to gain control of tunnel project

CHEMICALS

26. AGRICULTURE:

Farmers nationwide train on using herbicide blamed for damage

WASTES & HAZARDOUS SUBSTANCES

27. RECYCLING:

Pilot project works to clean up all those Mardi Gras beads

28. SOLID WASTE:

Recycling dirty diapers? That'll cost you in this Texas city

STATES

29. KANSAS:

Dog tries to run for governor, but state tells him to heel

INTERNATIONAL

30. ENGLAND:

BBC to scrap single-use plastics by 2020

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Subcommittee on Food and Agriculture

National Science and Technology Council

***DRAFT*: SFA Timeline: Activities and Deliverables—April through October 2019**

April 2018 through September 2018

- Refine Framework document
    - Finalize federal government S&T opportunities in alignment with the Rural Task Force, with specific goals, strategies, actions, and performance measures identified for the next 5 years
- Submit Framework document to Committee on Science (COS) to begin the review, approval, and clearance process
- Publish Framework document no later than October 1, 2018
- Execute and coordinate Framework recommendations through SFA member agencies, other NSTC committees, and other appropriate groups
    - Highlighted Activities
        - Catalog ongoing investments in technology to drive innovation in rural America and deliver safe, transformative technologies to farmers and consumers
        - Begin developing a plan and vision for how big data can be better leveraged to revolutionize the agricultural sector
- Discuss, coordinate across agencies and federal workgroups, and agree upon federal budget priorities for FY 2020 annual budget request for appropriations

October 2018 through March 2019

- Execute and coordinate Framework recommendations through SFA member agencies, other NSTC committees, and other appropriate groups
- Evaluate progress (collect and analyze data) to identify outputs and outcomes in achieving SFA goals
- Discuss, coordinate across agencies and federal workgroups, and agree upon federal budget priorities for FY 2021 annual budget request for appropriations
- Draft and deliver internal concise report on SFA activities for COS/OSTP, Task Force on Agriculture and Rural Prosperity, SFA agencies, and others as identified by COS/OSTP
- Draft public report on SFA current and future (5 year) goals, activities, and outcomes

April 2019 through September 2019

- Discuss, coordinate across agencies and federal workgroups, and agree upon federal budget priorities for FY 2021 annual budget request for appropriations
- Execute and coordinate Framework recommendations through SFA member agencies, other NSTC committees, and other appropriate groups
    - Highlighted Activities & Deliverables
        - Complete big data vision and plan for the agricultural sector

        - Submit plan to COS to begin review and clearance process
        - Begin identifying best practices for big data management in agricultural applications
- Evaluate progress (collect and analyze data) to identify outputs and outcomes in achieving SFA goals
- Submit public report on SFA current and future (5 year) goals, activities and outcomes for COS to begin the review and clearance process (publication late 2019)
- Develop SFA work plan for next 1.5 years; submit to COS for review

**Note that each year the SFA will revisit current priorities and identify any new high priority items that must be addressed, this includes being responsive to any new priorities identified by the Task Force on Agriculture and Rural Prosperity.

Message

From: Dravis, Samantha [dravis.samantha@epa.gov]
Sent: 11/14/2017 10:10:22 PM
To: Ford, Hayley [ford.hayley@epa.gov]; Gunasekara, Mandy [Gunasekara.Mandy@epa.gov]; Sands, Jeffrey [sands.jeffrey@epa.gov]; Bennett, Tate [Bennett.Tate@epa.gov]
CC: Hupp, Millan [hupp.millan@epa.gov]
Subject: RE: Meeting Request- National Corn Growers Association President

Ex. 5 Deliberative Process (DP)

From: Ford, Hayley
Sent: Tuesday, November 14, 2017 3:20 PM
To: Dravis, Samantha <dravis.samantha@epa.gov>; Gunasekara, Mandy <Gunasekara.Mandy@epa.gov>; Sands, Jeffrey <sands.jeffrey@epa.gov>; Bennett, Tate <Bennett.Tate@epa.gov>
Cc: Hupp, Millan <hupp.millan@epa.gov>
Subject: FW: Meeting Request- National Corn Growers Association President

Ex. 5 Deliberative Process (DP)

Let me know your thoughts. Thanks!

Hayley Ford
Deputy White House Liaison and Personal Aide to the Administrator
Environmental Protection Agency
ford.hayley@epa.gov
Phone: 202-564-2022
Cell: Ex. 6

From: Colleen Willard [mailto:willard@ncga.com]
Sent: Thursday, November 09, 2017 2:12 PM
To: Pruitt, Scott <Pruitt.Scott@epa.gov>
Subject: Meeting Request- National Corn Growers Association President

Good afternoon!

I am hoping to schedule a meeting for National Corn Growers Association President, Mr. Kevin Skunes, and Administrator Pruitt. Mr. Skunes is available after 10:00 am on December 7th and before noon on December 8th. Administrator Pruitt has indicated to Mr. Skunes his desire to meet, so please let me know if there is an agreeable date/time.

Best,
Colleen

Colleen M. Willard
Director, Public Policy
National Corn Growers Association
20 F Street NW, Suite 600
Ex. 6 Direct

willard@ncga.com

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From: Bennett, Tate [Bennett.Tate@epa.gov]
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To: Ford, Hayley [ford.hayley@epa.gov]; Dravis, Samantha [dravis.samantha@epa.gov]; Gunasekara, Mandy [Gunasekara.Mandy@epa.gov]; Sands, Jeffrey [sands.jeffrey@epa.gov]
CC: Hupp, Millan [hupp.millan@epa.gov]
Subject: RE: Meeting Request- National Corn Growers Association President

Defer to everyone else. I have a friend over there and would be happy to see what it's about- off record- (congratulatory/ several new asks/ etc.).

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Message

From: EPA Press Office [press=epa.gov@cmail19.com]
on behalf of EPA Press Office [press@epa.gov]
Sent: 3/13/2018 3:15:04 PM
To: Sands, Jeffrey [sands.jeffrey@epa.gov]
Subject: FRONT PAGE: EPA Chief Scott Pruitt Touts Trump Administration Actions

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The Omaha World-Herald

EPA Chief Scott Pruitt Touts Trump Administration Actions, Updates Ethanol Dispute

Joe Morton
March 13, 2018
www.omaha.com/news/nebraska/epa-chief-scott-pruitt-touts-trump-administration-actions-updates-ethanol/article_86203c42-aecd-5b9e-8ca5-8dd5a7fc0e87.html

Environmental Protection Agency chief Scott Pruitt said Monday that he and President Donald Trump remain committed to robust federal ethanol mandates, but he also emphasized the need to address ongoing volatility in the marketplace.

“You don’t want that kind of uncertainty out there,” Pruitt said.

At issue is the Renewable Fuel Standard, which requires a certain amount of ethanol and biodiesel to be blended into the nation’s fuel supply each year, a requirement the EPA enforces through the use of certificates known as RINs, which refineries either earn or purchase.

Refineries have complained that they are getting hurt by RIN price spikes caused by Wall Street speculation and have pushed to cap those prices. The ethanol industry and Corn Belt lawmakers fiercely oppose such a move, saying it would undermine innovation and growth in the biofuels sector.

Pruitt said his agency would administer the Renewable Fuel Standard by following both the letter of the law and the spirit behind it, but he noted that the RIN system was originally created as an accounting mechanism to track compliance.

“It’s turned into something different than that over the years,” he said.

Pruitt’s comments came during a question-and-answer session with reporters in his Washington headquarters. He touted EPA actions during the Trump administration’s first

year and particularly his travels to different parts of the country, including a stop in Nebraska during which he met with Republican Gov. Pete Ricketts and others.

Pruitt said the agency has made progress in providing regulatory certainty and ended the approach of making policy through court settlements that didn't allow for the same kind of transparency as the traditional rule-making process.

He cited the EPA's rollback of the so-called Waters of the U.S. rule, which many farmers worried would saddle them with excessive compliance costs. And he highlighted EPA efforts to work through the long list of Superfund sites across the country, including Omaha's.

As for the RFS, he said that the administration has kept volume requirements of ethanol high but that the issues surrounding RIN prices are not easily addressed.

"The president has a commitment to RFS and the farming and ranching community across this country, but he doesn't want refineries shut down either," Pruitt said.

Ethanol supporters question how much effect RIN prices have on refiners and say allowing E15 to be sold year-round would help ease the situation.

Pruitt supports year-round sale of E15 but said it's not a policy matter so much as a legal question. He said he's directed his aides to explore what is permissible under the law.

"I told the folks in Iowa if the law allows me to do it I'll sign it tomorrow," Pruitt said. "Because I think it doesn't make a lot of sense to only be able to sell nine months out of the year. You ought to be able to sell 12 months out of the year."

Pruitt talked about other potential approaches to addressing RIN prices that would stop short of a cap, such as enhancing transparency in the marketplace.

There's evidence some are "hoarding" RINs in ways that drive up their price, he said, and he cited proposals to limit those who can buy and sell the certificates.

Pruitt said he's looking for some kind of solution that will work for both sides, but he repeatedly stressed the importance of tackling those price fluctuations.

"We have to get more stability in the valuation of RINs," he said. "It has to occur."

Renewable Fuels Association President and CEO Bob Dinneen later released a statement saying the group was "encouraged" by Pruitt's comments about E15.

Dinneen said the EPA has the legal authority to allow year-round E15 sales, urged the agency to take action soon and agreed that RIN hoarding is distorting the market.

"We would be receptive to any proposals bringing more transparency and liquidity to the RIN market," Dinneen said. "Fundamentally, we believe that any effort to address RIN costs should be through demand expansion."

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From: Ford, Hayley [ford.hayley@epa.gov]
Sent: 11/14/2017 8:19:37 PM
To: Dravis, Samantha [dravis.samantha@epa.gov]; Gunasekara, Mandy [Gunasekara.Mandy@epa.gov]; Sands, Jeffrey [sands.jeffrey@epa.gov]; Bennett, Tate [Bennett.Tate@epa.gov]
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From: EPA Press Office [press=epa.gov@cmail19.com]
on behalf of EPA Press Office [press@epa.gov]
Sent: 3/13/2018 2:30:04 PM
To: Sands, Jeffrey [sands.jeffrey@epa.gov]
Subject: Pruitt Suggests Keeping Speculators From Ethanol Credits Might Lower Costs

Houston Chronicle

Pruitt Suggests Keeping Speculators From Ethanol Credits Might Lower Costs

James Osborne
March 11, 2018
www.houstonchronicle.com/business/article/Pruitt-suggests-keeping-speculators-from-ethanol-12747867.php

EPA chief Scott Pruitt suggested Monday that the government might limit Wall Street's ability to trade ethanol-blending tax credits as a way to lower costs for refineries.

Federal law requires refiners to blend gasoline with up to 10 percent ethanol, but allows companies that don't to meet their obligation by buying government-issued credits. But refiners claim that the market for credits is opaque, thinly traded and subject to manipulation by speculators who can send price skyrocketing.

In a meeting with reporters at the Environmental Protection Agency's headquarters, Pruitt suggested that removing speculators from the market for blending credits might be one way to help keep costs lower.

"There's some things on the trading platform I think should happen no matter what," he said. "There seems to be a hoarding of [credits], which inflates the price. Some have talked about limiting the participants who buy and sell, so you can get away from some of the speculation that's taking place."

The credits market is another front in the battle between oil and farm interests over federal rules that require the the blending of ethanol, which is made from corn. The ethanol industry provides thousands of jobs in Midwest farm states, but oil states view ethanol's growth as hurting one of their major industries and employers because more ethanol in gasoline ultimately means less oil.

The mandate also drives up costs for many refineries around Houston and along the Gulf Coast, a powerful economic driver for the region. The largest refinery on the East Coast cited ethanol mandates as factor in its recent bankruptcy filing.

The Trump administration is trying to broker a deal between oil state Republicans like Sen. Ted Cruz, of Texas and corn state Republicans like Sen. Chuck Grassley, of Iowa, who have been at odds for months over the the future of federal ethanol and biofuel mandates. The mandates was adopted under the administration George W. Bush as a way to reduce the nation's dependence on foreign oil — before the U.S. production boom unleashed by hydraulic fracturing, or fracking.

In addition to limiting trading in the credits, known as Renewable Identification Numbers, or RINs, Pruitt also brought up the possibility of lifting an air pollution

regulations that prevent the sale of fuels with higher concentrations of ethanol during the summertime.

"I told the folks in Iowa, if the law allows me to do it I'll sign it tomorrow," Pruitt said. "It doesn't make sense to only be able to sell nine months out of the year."

...

Pruitt didn't discuss the cap proposal, but rather focused on the need to find a solution that would help both refineries and ethanol producers.

"These market challenges we have are real," he said. "The President has a commitment to the [ethanol mandate] and ranching and farming communities in this country. But he doesn't want refineries to shut down either."

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Message

From: Subramanian, Hema [Subramanian.Hema@epa.gov]
Sent: 2/14/2018 4:52:19 PM
To: Sands, Jeffrey [sands.jeffrey@epa.gov]
Subject: FW: Ag connections -- ammonia risk assessment

FYI (see below), the ammonia assessment for drinking water has activity coming up: potential FRN in as early as April. So I'm scheduling their briefing for you for next week.
---Hema.

Hema Subramanian
Acting Special Assistant to the Senior Advisor for Agriculture
Office of the Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Phone (202) 564-5041
subramanian.hema@epa.gov

From: Tun, Amanda
Sent: Wednesday, February 14, 2018 11:00 AM
To: Subramanian, Hema <Subramanian.Hema@epa.gov>
Subject: RE: Ag connections -- ammonia risk assessment

Hi Hema,

As of now we have this is scheduled: NCEA management review starting next week, then IOAA review, tech edit, and preparation of an FR notice for the release of the ammonia assessment plan soon after March 23.

If we could go ahead and schedule 2/22, that would be great for Vince Cogliano will not be able to make it on March 2nd. Please let me know.

Thanks so much!

Amanda

Message

From: Bennett, Tate [Bennett.Tate@epa.gov]
Sent: 1/8/2018 2:46:46 PM
To: Sands, Jeffrey [sands.jeffrey@epa.gov]
Subject: FW: Report to the President from the Task Force on Agriculture and Rural Prosperity
Attachments: Rural Prosperity Task Force Members.pdf; Report to the President of the United States from the Task Force on Agriculture and Rural Prosperity.pdf

From: Rollins, Blake - OSEC, Washington, DC [mailto:Blake.Rollins@osec.usda.gov]
Sent: Monday, January 8, 2018 9:08 AM
Cc: Adcock, Rebeckah - OSEC, Washington, DC <Rebeckah.Adcock@osec.usda.gov>; Bridgforth, Turner - OSEC, Washington, DC <Turner.Bridgforth@osec.usda.gov>
Subject: Report to the President from the Task Force on Agriculture and Rural Prosperity

Good morning,

In advance of the President's address later today at the American Farm Bureau Federation Convention, I wanted to send you a PDF of the full report to the President from the Task Force on Agriculture & Rural Prosperity. Additionally, I've attached a letter from Sec. Perdue thanking all of the members of the Ag & Rural Prosperity Task Force for their service.

Please let us know if you have any questions.

Link to the report will be available here: https://www.usda.gov/ruralprosperity

Thank you,
Blake

Blake Rollins
Director, Office of External and Intergovernmental Affairs

United States Department of Agriculture
Office: (202) 205-4380

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USDA

United States Department of Agriculture

Report to the President of the United States from the Task Force on Agriculture and Rural Prosperity

Secretary Sonny Perdue, Chair

Dear Mr. President,

On April 25, 2017, you established the Interagency Task Force on Agriculture and Rural Prosperity through Executive Order 13790 and appointed me as its Chair. The purpose and function of this Task Force have been to identify legislative, regulatory, and policy changes to promote agriculture, economic development, job growth, infrastructure improvements, technological innovation, energy security, and quality of life in rural America. This report fulfills your request that these recommended changes be identified and presented to you, in coordination with the other members of the Task Force.

In response to your call to action to promote agriculture and rural prosperity in America, the Task Force envisioned a rural America with world-class resources, tools, and support to build robust, sustainable communities for generations to come. Members of the Task Force met, along with staff involved in separate working groups, to set priorities and a framework. Along the way, we held several "listening sessions" across the country, so that we heard directly from the communities that comprise rural America.

With the voice of rural America leading the way, and in close collaboration with local, state, and tribal leaders, more than 21 federal agencies, offices, and executive departments identified over 100 actions the federal government should consider undertaking to achieve this vision. These recommendations were organized around five key indicators of rural prosperity: e-Connectivity, Quality of Life, Rural Workforce, Technological Innovation, and Economic Development.

e-Connectivity for Rural America: In today's information-driven global economy, e-connectivity is not simply an amenity - it has become essential. E-connectivity, or electronic connectivity, is more than just connecting households, schools, and healthcare centers to each other as well as the rest of the world through high-speed internet. It is also a tool that enables increased productivity for farms, factories, forests, mining, and small businesses. E-connectivity is fundamental for economic development, innovation, advancements in technology, workforce readiness, and an improved quality of life. Reliable and affordable high-speed internet connectivity will transform rural America as a key catalyst for prosperity.

Improving Quality of Life: Ensuring rural Americans can achieve a high quality of life is the foundation of prosperity. Quality of life is a measure of human well-being that can be identified though economic and social indicators. Modern utilities, affordable housing, efficient transportation and reliable employment are economic indicators that must be integrated with social indicators like access to medical services, public safety, education and community resilience to empower rural communities to thrive. Focusing and delivering key federal reforms will enable rural Americans to flourish and prosper in 21st Century communities.

Supporting a Rural Workforce: To grow and prosper, every rural community needs job opportunities for its residents, and employers need qualified individuals to fill those needs. This requires identifying employment needs, attracting available workers from urban and rural centers alike, and providing the workforce with training and education to best fill the available needs. There are many opportunities to partner with local businesses and organizations to identify gaps, to work with all levels of educational institutions to provide career training and development, to fine-tune existing training programs, and to grow apprenticeship opportunities to develop the required workforce. Providing rural communities, organizations, and businesses a skilled workforce with an environment where people can thrive will grow prosperous communities.

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Harnessing Technological Innovation: By 2050, the U.S. population is projected to increase to almost 400 million people, and rising incomes worldwide will translate into a historic global growth in food demand. To feed a hungry world, we will need to harness innovation to increase output across American farmlands. In addition to increased crop yields, technological innovation can improve crop quality, nutritional value, and food safety. Innovations in manufacturing, mining, and other non-agricultural industries can enhance worker efficiency and safety. At the core of these developments that will further grow the rural economy is the expansion of STEM education, research, regulatory modernization, and infrastructure. Leveraging these innovations in an increasingly data-driven economy will also require further development of rural data management capabilities.

Economic Development: Infusing rural areas with stronger businesses and agricultural economies empowers America. Expanding funding options to increase the productivity of farmers and ranchers will lead to the enhanced viability and competitiveness of rural America. By promoting innovative farm technologies, energy security, recreation, agritourism and sustainable forest management, communities will be empowered to leverage the bounties of rural America. Investing in rural transportation infrastructure is needed for carrying more "Made in America" products to markets at home and abroad, and boosting our country's global competitiveness. Reducing regulatory burdens and attracting private capital will support our ultimate mission of empowering Rural America to feed the world.

While other sectors of the American economy have largely recovered from the Great Recession, rural America has lagged in almost every indicator. Your charge to identify and recommend a pathway back to prosperity for these fellow citizens is one we have taken seriously. The creation of the Task Force and your directives contained in an Executive Order were, after all, not an Executive Suggestion. We are proud to issue this final report on our endeavors.

Sincerely,

Sonny Perdue
United States Secretary of Agriculture
October 21, 2017

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I. The Opportunities of Rural America

I. The Opportunities of Rural America

Rural America includes 72% of the nation's land and 46 million people[1]. Rural areas encompass regions that focus on agricultural production as well as places where work is more often found in industries such as manufacturing, mining, and forestry. They include locales that are prosperous and rapidly-growing, locales that are chronically depressed, and everything in between. Rural America is home to many different racial and ethnic demographics and a wide array of economic activities. These residents live in a variety of settings, from counties bordering suburbs to remote and isolated areas.

Rural America has a diverse store of assets to draw upon: abundant land and natural resources; scenic and cultural amenities that attract new residents and visitors alike; a strong entrepreneurial spirit; and people of all ages and occupations. People remain in or move to rural areas for many reasons: to seek an active lifestyle, to take advantage of lower costs of living, to encounter less congestion, to enjoy a slower pace of life, and to more closely connect to nature and recreational opportunities. Many people return to their rural roots to raise children and reconnect with family and friends, filling workforce gaps and bringing needed leadership and professional skills.

American prosperity and well-being are intrinsically tied to rural America's ability to thrive in the new global economy; to build and attract an educated workforce and expand its population base; and to use its diverse and abundant natural resources to provide food, fiber, forest products, energy, and recreation.

From the forests of Maine to the deserts of Arizona, from the Mississippi Delta to the Upper Great Lakes, rural communities face diverse economic challenges that differ from those found in urban areas. Less dense and relatively remote populations are affected by difficulties in accessing transportation, telecommunications, healthcare, housing, economic development resources, and job opportunities. In many regions, such as the Midwest and Great Plains, these challenges are associated with high rates of young adults leaving the region, resulting in fewer workers and an aging population. Indeed, aging itself poses challenges, such as reducing workforce capacity and increasing the demand for healthcare, housing, and other services geared to the needs of an older population.

Alongside these challenges, rural America possesses inherent strengths which can be used for enhancing the prosperity of its people and its contribution to the economic well-being of the nation. Today's rural areas are more economically diverse than in the past, reflecting the national trend to greater reliance on service jobs. While traditional rural sectors such as agriculture, mining, and manufacturing employ a smaller percentage of the population than before, they continue to anchor the economies of more than half our counties across the nation. These sectors, disproportionately located in rural areas, exhibit higher-than-average productivity growth.

1 Unless otherwise noted, throughout this report, rural is defined using nonmetropolitan (nonmetro counties). The terms "rural" and "nonmetro" are used interchangeably. Both terms refer to counties outside of Metropolitan Statistical Areas, defined by the Office of Management and Budget (OMB), which include cities of 50,000 or more and counties connected to these cities through commuting. Studies designed to track and explain economic and social changes most often choose the metro and nonmetro classification because it allows the use of widely available county-level data. However, researchers and policy officials often employ multiple definitions to distinguish rural from urban areas.

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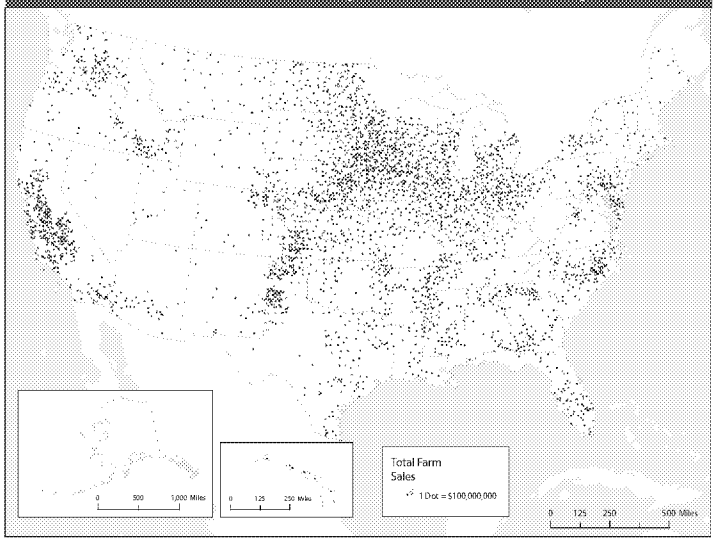
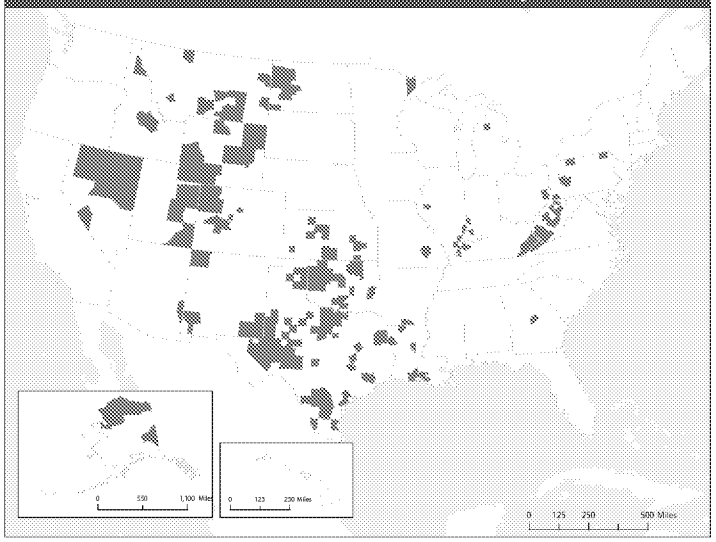
The dominance of traditional rural sectors varies across the country and reflects regions' most productive resources. For example, farm sales (gross sales of all farms in the United States that produce more than $1000 per year) are concentrated in California, the Upper Midwest, the Great Plains, and parts of the Eastern Seaboard. Mining-dependent counties are primarily in the Mountain West, Great Plains, and parts of Appalachia. Forested lands are predominant in mountainous areas of the east and west. Manufacturing tends to be more concentrated in the eastern half of the United States, particularly the Upper Midwest and the South.

FARMING AREAS (2012 FARM SALES)



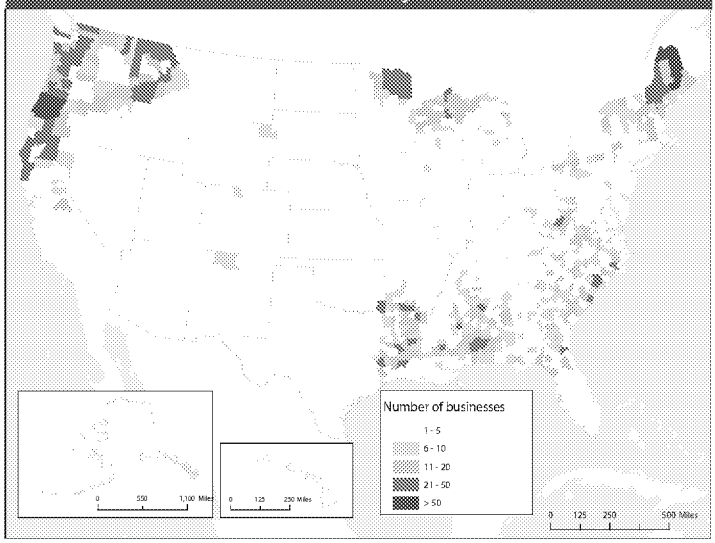
Source: 2012 Census of Agriculture

MINING DEPENDENT COUNTIES, 2015



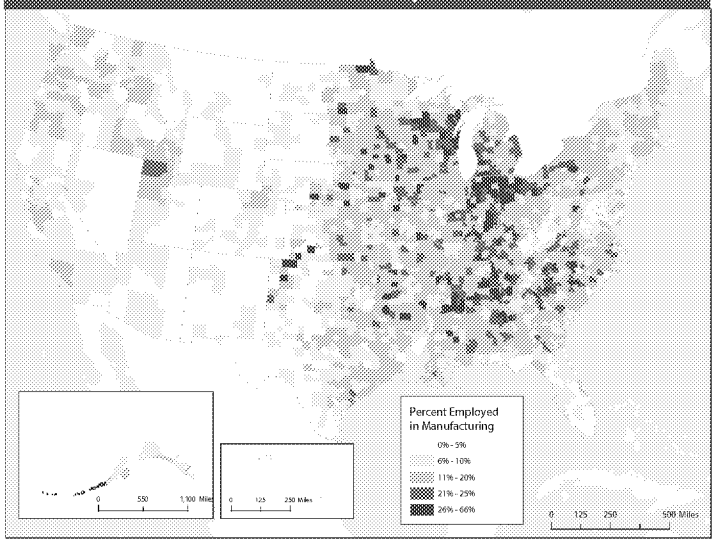
Source: USDA Economic Research Service Typology Codes, using data from the Bureau of Economic Analysis, 2015

FORESTRY-RELATED BUSINESSES, 2014



Source: Census Bureau, County Business Patterns, 2014

SHARE OF EMPLOYMENT IN MANUFACTURING, 2011-15



Source: Census Bureau, American Community Survey, 2011-15

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Overcoming the challenges and realizing the opportunities for prosperity in rural America requires action on multiple fronts, including promoting economic development, advancing innovation and technology, ensuring a well-trained and productive workforce, and improving the quality of life in rural communities. Success depends, in large part, on promoting two key drivers of long-term growth and prosperity: broad-based productivity growth in the rural economy and connectivity of rural people to each other, to urban areas, and to the rest of the world.

Credit: Getty Images

Achieving increased productivity usually requires innovation and technology, as well as access to capital, infrastructure, and an adequately trained workforce for businesses. In turn, the rural workforce depends on quality of life in rural areas, including the assurance that rural schools and health services are of sufficient quality, either to train productive workers from the local population or to attract employees and their families from other places. Drawing and retaining people and businesses in rural areas promotes economic development, because a large portion of employment growth in rural economies - in retail, healthcare, law enforcement and other public-sector jobs - depends on growth in the rural population and local consumer demand. Hence, improving quality of life in rural areas is not only an important goal, but is also important to ensuring a productive rural workforce and maximizing rural prosperity.

In our increasingly digital economy, distance between rural economic inputs and markets is less of a barrier to business growth. Expanding availability of high-speed internet or e-connectivity allows rural areas to take advantage of this new reality in addition to broader domestic and international markets. Unfortunately, rural areas remain less connected to reliable high-speed internet today than metropolitan areas and have lower usage rates compared with urban areas. As a result, a wide array of digital services and activities - from e-commerce to telehealth to digital learning - are becoming an increasingly important feature for a prosperous rural life.

Unleashing the potential and ingenuity of rural communities is an integral part of making America great again. This report should serve as a roadmap to guide the federal government towards empowering rural America to take advantage of the many opportunities that can and do exist. Facilitating and supporting access to world-class resources and tools that build robust, sustainable communities for generations to come is required for success.

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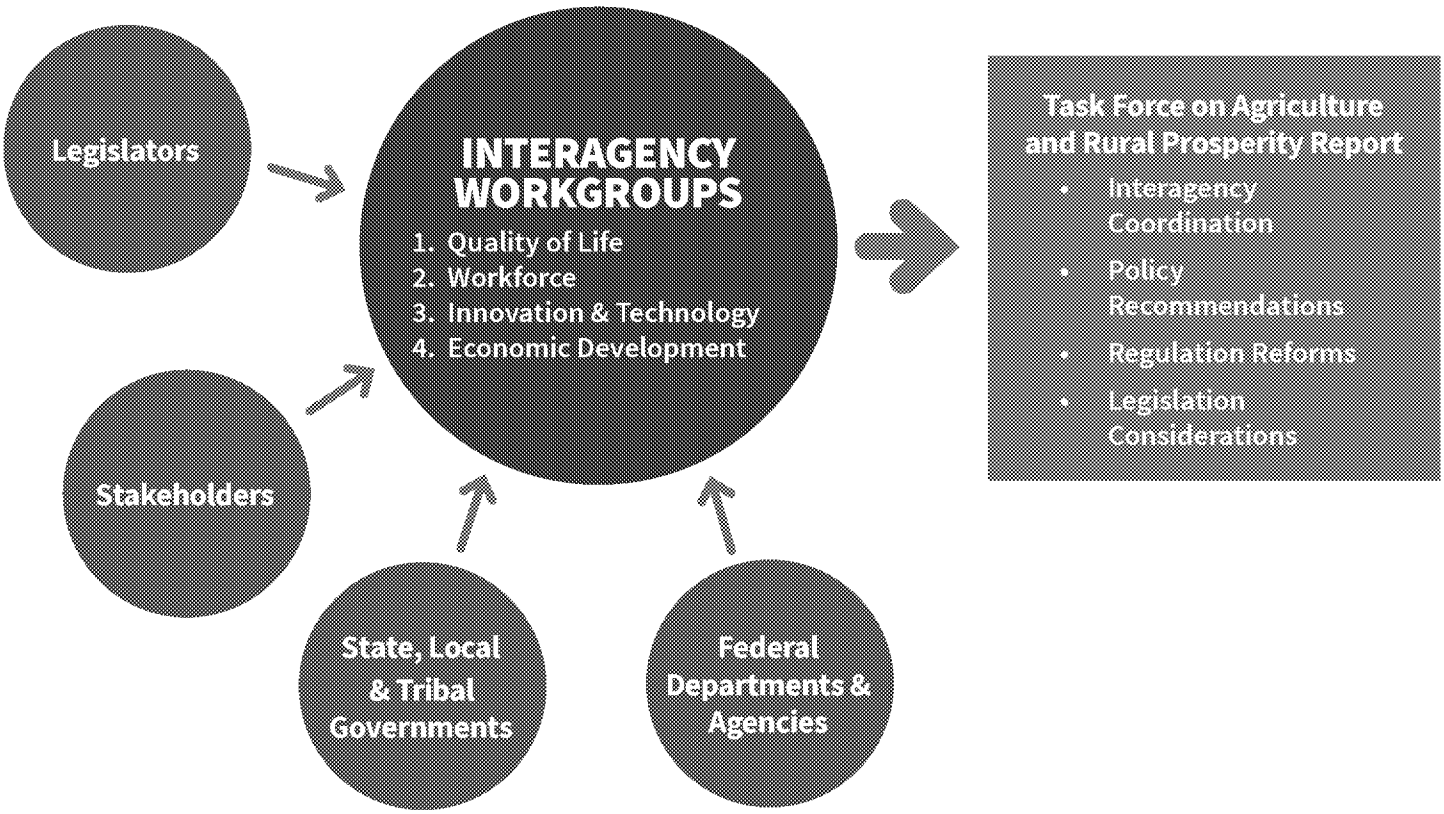
II. Task Force Approach

II. Task Force Approach

The President's Executive Order directed the Task Force to identify key legislative, regulatory, and policy changes to achieve rural prosperity in seven areas: rural American agriculture, economic development, job growth, infrastructure improvements, technological innovation, energy security, and quality of life. To improve customer service and maximize efficiency across the federal government, interagency coordination was also identified as a key place for change.

This report represents a summary of the recommendations gathered by the Task Force through direct engagement with stakeholders, consultations with state, local, and tribal governments, as well as federal agencies with equity in rural America.



The Voice of Rural America

The Task Force found significant guidance from rural stakeholders in the development of this report. Beginning at the inaugural public session of the Task Force held on June 16, 2017 at the Department of Agriculture, and continuing through the comments submitted on a regular basis through an online portal, we heard from the people of America. Additionally, Task Force Chair Secretary Perdue, along with senior federal leadership hosted roundtables in Wisconsin, Georgia, New Hampshire, West Virginia, and North Carolina to hear from partners and understand the concerns of rural citizens.

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Our Federal Family

To capitalize on the programmatic specialties spanning the federal government, the Task Force divided into four workgroups comprised of representatives of federal departments, specific agencies, and subject matter experts. Each workgroup focused on a specific topic, including: Quality of Life, Rural Workforce, Innovation and Technology, and Economic Development. Together, they designed a roadmap of goals and strategies to make our country great again through the prosperity of rural America. Collectively, the workgroups identified over 100 recommended potential actions. To inform these recommendations, a robust and in-depth analysis from the Department of Agriculture's Economic Research Service was developed to identify the opportunities and challenges for agriculture and rural prosperity in America.

Task Force members include:

- The Secretary of the Treasury
- The Secretary of Defense
- The Attorney General
- The Secretary of the Interior
- The Secretary of Commerce
- The Secretary of Labor
- The Secretary of Health and Human Services
- The Secretary of Transportation
- The Secretary of Energy
- The Secretary of Education
- The Administrator of the Environmental Protection Agency
- The Chairman of the Federal Communications Commission
- The Director of the Office of Management and Budget
- The Director of the Office of Science and Technology Policy
- The Director of the Office of National Drug Control Policy
- The Chairman of the Council of Economic Advisers
- The Assistant to the President for Domestic Policy
- The Assistant to the President for Economic Policy
- The Administrator of the Small Business Administration
- The United States Trade Representative
- The Director of the National Science Foundation
- The heads of such other executive departments, agencies, and offices as the President or the Secretary of Agriculture may, from time to time, designate

Putting the Recommended Actions to Work

To ensure that the findings of this report have a meaningful impact on rural America, the Task Force urges that work and oversight continue to compel action. Leadership is still required to accomplish many of its goals, including to implement the initial recommendations for which action plans have begun; to move other ideas from conception into action plans; to expand stakeholder participation; to set regional task force solutions; to increase the activities of state, local, and tribal partners; and to advance other suggestions federal partners may make in the future.

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The Task Force proposes the following structure for the continuation and implementation of ongoing federal interagency action aimed at improving rural prosperity:

1. **Establish a Federal *Commission on Agriculture and Rural Prosperity*** – The Commission should be structured similar to the current Task Force. This group of Cabinet and federal executive leaders should meet no less than bi-annually to ensure appropriate interagency coordination and execution of the Task Force actions and future agreed-to activities. Further, the Commission should prepare regular reports to the President, not less than once a year, to demonstrate progress on Commission actions.

2. **Establish a Stakeholder Advisory Council to Advise the Commission** – The Commission should prioritize on-going, robust stakeholder participation from the private sector and non-federal governmental (State, Local & Tribal) interests. The role of the Advisory Council would be to help identify, develop and implement actions that lead to prosperity in rural America. The Advisory Council should meet on a regular basis with the Commission's Managing Director to provide input on recommendations, action plans and opportunities for federal, state, tribal, local and public private partnerships.

3. **Establish a Managing Director to Oversee the Commission and Advisory Council** – A Managing Director should be appointed and charged with establishing strategic and communications plans for implementing the work of the Commission, including development and execution of action plans. The Managing Director should also be tasked with organizing and managing the meetings and work product of the Commission and Stakeholder Advisory Council. Additionally, the office would develop, execute and expand inter-agency agreements, MOUs and create new agreements as necessary, as well as develop and manage implementation metrics and measures to guide the interagency actions and the success of the Commission.

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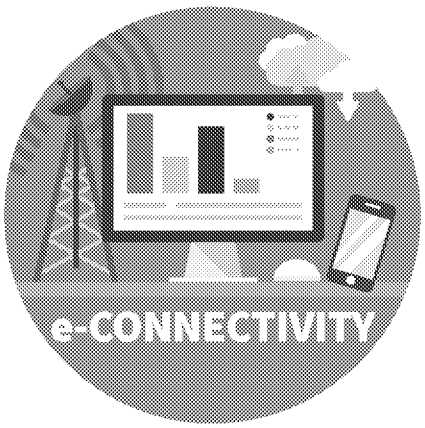
III. Answering the Call to Action for Rural America

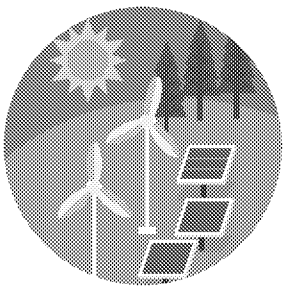
RURAL PROSPERITY

Rural America can make our country great again.



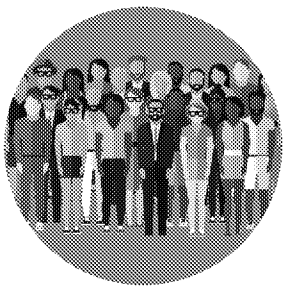
ECONOMIC DEVELOPMENT

- Access to Capital
- Tax Reform
- Natural Resources
- Regulatory Reform
- Global Market
- Infrastructure



INNOVATION & TECHNOLOGY

- Biotechnology
- Sound Science
- Productivity
- Research
- Development



WORKFORCE

- Available
- Skilled
- Trained
- Educated
- Reliable

QUALITY OF LIFE

- Educational Opportunities
- Health Services
- Rural Housing
- Community Resiliency
- Infrastructure

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Photo credit: Getty Images

Call to Action #1: Achieving e-Connectivity for Rural America

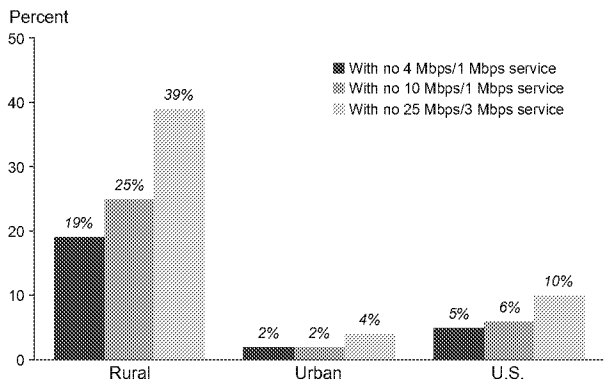
In today's information-driven global economy, e-connectivity is not simply an amenity - it has become essential. E-connectivity, or electronic connectivity, is more than just connecting households, schools, and healthcare centers to each other as well as the rest of the world through high-speed internet. It is also a tool that enables increased productivity for farms, factories, forests, mining, and small businesses. E-connectivity is fundamental for economic development, innovation, advancements in technology, workforce readiness, and an improved quality of life. Reliable and affordable high-speed internet e-connectivity will transform rural America as a key catalyst for prosperity.

The expansion of high-speed, high-capacity internet to connect rural America to the "digital superhighway" of global commerce is a key infrastructure priority. E-connectivity for rural America is essential for ensuring America's economic competitiveness and enabling all Americans to be plugged in to a world of opportunity.

Over the past decade, high-speed internet has been transformational for the U.S. economy. It has facilitated commerce and generated sustainable economic activity. A recent study indicated that the rural broadband industry supported nearly 70,000 jobs and over $100 billion in commerce in 2015 (Kuttner, 2016). In addition, the U.S. Census Bureau estimates that U.S. retail e-commerce sales amounted to $111.5 billion in the second quarter of 2017, an increase of nearly 5% from the prior quarter and 16.2% year-over-year growth.

Unfortunately, too many Americans do not experience the benefits of robust internet service. As of 2014, 39 percent of the rural population lacked access to broadband at speeds necessary for advanced telecommunications and data transfer capability (see chart for comparison with urban and national populations). This e-connectivity gap not only prevents rural Americans from participating in the global marketplace but also limits urban Americans

Americans lacking access to fixed terrestrial broadband service at various speeds



Source: Federal Communications Commission, *2016 Broadband Progress Report* (statistics as of December 2014).

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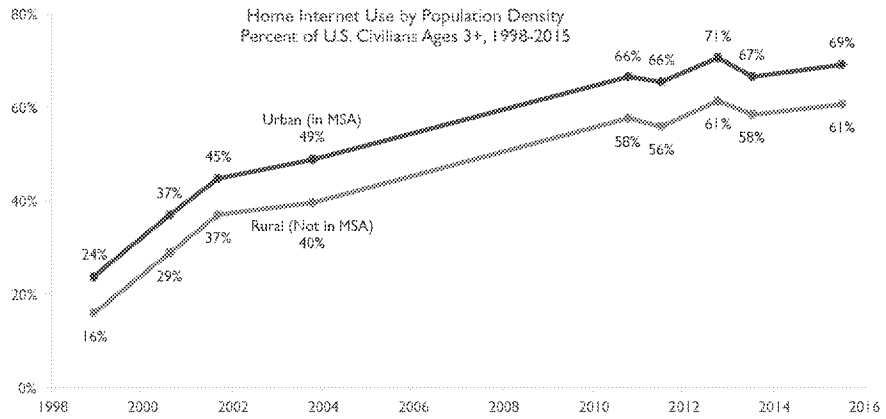
from accessing the innovations and products of rural America. Additionally, this digital divide means rural American businesses miss opportunities to serve new global customers.



Source: National Telecommunications and Information Administration, Digital Nation Data Explorer https://ntia.doc.gov/data/digital-nation-data-explorer

The lack of complete e-connectivity in rural areas can be attributed to many factors. It is particularly challenging and expensive to deploy broadband networks to rural America—namely due to low population density and challenging geography. In addition to these difficulties, broadband providers often face bureaucratic obstacles to building a network, including arduous application processes, lack of access to infrastructure, and burdensome regulatory reviews.

Rural e-connectivity supports economic development for the whole nation through access to capital and global markets, job training and workforce development, innovation and technology and enhanced quality of life. Throughout this report, examples illustrate that robust and reliable e-connectivity is a critical ingredient for rural prosperity.

Connectivity is especially vital for the original "Made in America" industry – agriculture – to increase farm productivity to feed the world. The U.S. Census Bureau estimates that the U.S. population is expected to rise to almost 400 million by 2050. To supply this number of people with food, American farms need reliable, real-time internet connectivity to oversee operations in the fields, manage finances, and respond to international market conditions. To match world food demand, innovative technologies such as precision agriculture can ensure American farms reach the necessary levels of productivity. Such methods require every part of the farm to be connected to the worldwide web, not just the farmhouse.

Photo credit: Getty Images

Unlocking rural prosperity by promoting e-connectivity for all Americans also provides the opportunity to achieve a higher quality of life through modern teleworking, telemedicine and telehealth, and digital learning. For instance, the shifting digital economy provides new opportunities for rural Americans seeking the ability to work from home. According to the Bureau of Labor Statistics, from 2003 to 2015, the share of workers doing some or all of their work away from their office increased from 19 to 24 percent nationwide.

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Photo credit: Getty Images

High-speed internet access can also address the gap in health services in rural communities. Telehealth and telemedicine allow rural residents to connect to distant healthcare professionals, conduct remote monitoring of chronic medical conditions, and access specialists that may not work in their local health facilities. Remote healthcare through telehealth and telemedicine also reduces the cost of care, improves patient outcomes, and reduces the burden on patients.

E-connectivity also allows rural residents to access a broader range of educational opportunities. Digital learning is growing rapidly and likely to be particularly impactful for more remote rural areas that may not have access to the same educational resources as larger or more urban communities. According to the National Center for Education Statistics, the share of undergraduate students taking digital education courses grew from 16 percent in 2003-04 to 32 percent in 2011-12. However, many rural elementary and secondary schools do not have adequate connectivity. The Federal Communications Commission estimates that 16 percent of schools in small towns and 21 percent of schools in rural areas still lack a fiber connection.

Solving the broadband access gap in rural America will require a concerted effort to encourage deployment of new infrastructure and innovative business models that promote capital investments. The development and implementation of other strategic infrastructure systems across the United States was key to ensuring past generations of rural Americans weren't left behind as the rest of the world modernized, including rural electrification, rural telephone service, and the Eisenhower Interstate Highway System. The economic equalizer of our day is high-speed internet to every rural community and production site, connecting rural America's potential to a world of opportunity.

Past efforts to connect rural America have resulted in the allocation of substantial amounts of federal funds for broadband deployment and, while such investments made important contributions, our country has not fully achieved the connectivity needed for success in the economy of today and tomorrow. Although capital investment is one aspect of bridging the divide, far too many government policies stifle network buildout. By streamlining the deployment process, allowing access to existing infrastructure, and reducing barriers to buildout, risk can be reduced and providers can be encouraged to expand networks throughout rural America.

As we modernize and reduce regulations, we should also consider the full range of means to connect rural communities, including satellite, fixed wireless, and cellular networks. These technologies can be less expensive to deploy than traditional wired networks and are rapidly improving in quality. A technology-neutral, service-focused approach to broadband deployment may allow for more rapid and widespread connectivity.

Rural prosperity can only truly be achieved by connecting rural America to high-speed internet. It is critical to act quickly as the need for rural e-connectivity is growing every day. We must also ensure rural America won't be left behind as we move toward next-generation networks like 5G, and emerging technologies like the Internet of Things. Prioritizing e-connectivity for rural America is the key to generating prosperity, investment, and innovation.

Photo credit: Getty Images

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Objectives & Recommended Actions

1. **Establish Executive Leadership to Expand E-connectivity Across Rural America** – The Task Force recommends that the Executive Office of the President develop and implement a strategy based on best practices to deploy rural e-connectivity across the nation. The recommended participating offices and agencies include the National Economic Council, White House Office of Science and Technology Policy, Office of American Innovation, Department of Agriculture, National Telecommunications and Information Administration under the Department of Commerce, the Federal Communications Commission, the Department of Education, the Department of Health & Human Services, the Department of the Interior, and other Departments and agencies needed.

2. **Assess State of Rural E-connectivity** – Coordination by the Executive Office of the President of a multi-sector assessment of the current state of affordable rural high-speed internet access, including identification of infrastructure and service gaps. Such a data-driven analysis of service levels, reliability, and affordability should inform the creation of the rural e-connectivity strategy. An analysis of total capital investment necessary for rural e-connectivity should be conducted, including existing federal and non-federal subsidies.

3. **Reduce Regulatory Barriers to Infrastructure Deployment** – Revise federal regulations to encourage investment in reliable, high-speed internet in rural areas, expedite approval and internal review timelines and streamline permitting processes to promote increased build-out of infrastructure. The federal government should coordinate any regulatory reform efforts with those being pursued by the Administration's efforts to reduce regulatory burdens under EO 13771, "Reducing Regulation and Controlling Regulatory Costs."

Photo credit: Getty Images

4. **Assess Efficacy of Current Programs** – Simultaneous with the above actions, the Task Force recommends an assessment of existing federal grants and subsidy programs devoted to or used for deploying e-connectivity. The assessment should include identification of duplicative and overlapping programs throughout the federal government, and recommendations to enhance the coordination of various funding streams to maximize impact.

5. **Incentivize Private Capital Investment** – Encourage free-market policies, laws, and structures at federal, state, tribal, and local government levels to create an environment conducive to investment, including public-private partnerships. Such partnerships can bring innovation and investment of sustainable capital to bridge the e-connectivity gap in the fastest and most affordable manner.

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Call to Action #2: Improving Quality of Life

Ensuring rural Americans can achieve a high quality of life is the foundation of prosperity. Quality of life is a measure of human well-being that can be identified though economic and social indicators. Modern utilities, affordable housing, efficient transportation and reliable employment are economic indicators that must be integrated with social indicators like access to medical services, public safety, education and community resilience to empower rural communities to thrive. Focusing and delivering key federal reforms will enable rural Americans to flourish and prosper in 21st Century communities.

Rural America offers opportunities to attain a high quality of life often characterized by abundant natural resources, a less hurried pace of life, and an affordable cost of living. As the modern economy becomes more mobile, the places that Americans choose to live is increasingly influenced by the quality of life in their home communities. For example, over the past 40 years, a desire to live close to natural amenities such as lakes, seashores, mountains, and areas with a moderate climate have driven population growth in many rural regions. This is especially seen in the Southeast, Great Lakes, Mountain West, and Pacific Coast regions. Within these outside areas, such features dramatically enhance the quality of life for rural communities and exhibit a large share of employment and earnings in recreation-related activities. Many of these recreation-based economies were hard hit by the Great Recession, slowing in population growth from 4.6 percent during 2002-08 to only by 1.2 percent during 2010-16 according to the U.S. Census Bureau. However, these areas continue to grow faster than other types of rural areas.

Despite the unique quality of life that some rural communities can provide, others face long-standing and emerging challenges. For example, there are two very different types of rural communities that tend to have a consistently high number of people leaving. One type has high poverty rates – more than 25 percent – and is hindered by low educational attainment and high unemployment. The other type is generally prosperous but tends to be remote, thinly settled, and lacking in scenic appeal for prospective residents or tourists. In general, quality of life deficits appear to be a main drawback for these communities.

In some places, housing affordability has become a major challenge, either because housing costs have risen rapidly or because incomes are insufficient for self-supported housing at market rates. These burdens are increasing among rural renters, in both high-amenity areas and in communities with high poverty rates.

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In such parts of rural America, addressing the shortage of local jobs and a lack of connection to those job opportunities will be a major factor in overcoming these challenges.

Transportation is often a challenge for many rural communities as well. According to the U.S. Bureau of Transportation Statistics, people living below the poverty level are less likely to own or have access to a personal vehicle to get to work. Compared to other commuters, people below the poverty level are more likely to use lower-cost options such as carpooling, taking public transportation, or using other transportation modes, but such options are less available in rural areas. The Department of Transportation's Federal Transportation Administration supports numerous small town and rural transportation systems in connecting their citizens to jobs, healthcare, and other critical destinations through various programs. Additionally, other federal agencies provide funding for rural transit services for specific trip purposes, such as visits to medical facilities. However, the presence of multiple funding streams often results in multiple networks serving the same rural area. Some states and localities around the nation have instituted methods to optimize federal funding programs into coordinated and unified systems to serve their citizens, yet creating and administering such coordination is an arduous task. As a result, many rural transit services remain expensive to subsidize and unable to fill the transportation needs of rural businesses and citizens.

Photo credit: Getty Images

Rural road safety is another quality of life issue that federal, state, and local governments are working to address. According to the Department of Transportation, more than half of all traffic fatalities in 2014 occurred on rural roads. In addition, the fatality rate per vehicle-mile-traveled in rural areas was 2.4 times higher than the fatality rate in urban areas, though that figure decreased by 24 percent between 2005-14. Moreover, almost two-thirds of drivers and passengers in rural crashes died at the scene in 2014, compared to just 35 percent in urban crashes. Such ratios were due in part due to higher speed crashes and increased distances to first responders and hospitals.

The modernization of built infrastructure for rural utilities is also an important component of quality of life and rural prosperity. This includes the full installation of smart grid technology throughout rural power systems. Rural electric cooperatives have begun deploying fiber optic networks throughout their service areas to meet the current, growing, and future demand for smart grid services, such as demand side management, distributed generation and renewable integration, and smart home technologies, as well as increased grid security. The ability to dynamically manage energy use is critical to ensuring network reliability, enhancing system-wide efficiency and keeping electric rates affordable for rural residents and businesses. The high-speed networks, connecting electric system infrastructure and even direct connections to customer locations, can also provide a platform and catalyst for fiber to rural homes.

Photo credit: USDA Flickr

Safe drinking water and sanitary waste disposal systems are vital for achieving a high quality of life. Additionally, water infrastructure is essential to many rural industries, e.g., farming, manufacturing, and mining (Kearney et al., 2014). It is also important to households, with more than 86 percent of the U.S. population relying on public water

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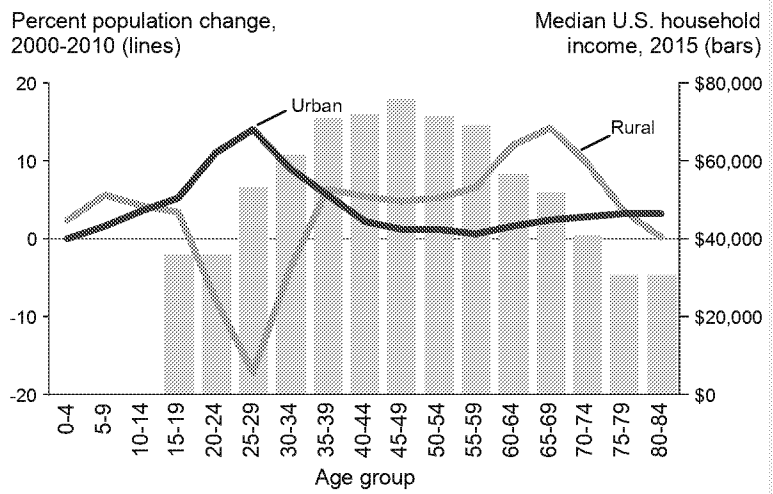
supply systems (EPA, 2013). Overall, water infrastructure is increasingly important to making rural areas attractive places to live and as a driver of rural recreation and tourism.

Many poor and remote rural areas also lag in high-speed internet connectivity and easy, fast access to other forms of infrastructure. These often include highways, airports, water and sewer facilities, care centers, housing options, and quality educational facilities. Building water treatment plants, hospitals, schools, homes, transportation systems and other impactful community infrastructure not only creates jobs, but also increases long-term aggregate demand for goods and services within a community as well as contributes to rural prosperity development.

As a byproduct of differing levels of housing and infrastructure, the population of rural America is neither steady nor growing and does not match with its potential. In fact, varying rates of growth and decline in rural America depend on age and other considerations that highlight both the challenges and opportunities related to quality of life in rural communities. In the years after high school, young adults seeking better educational and career opportunities disproportionately leave rural areas for urban destinations. Then, during more advanced periods of personal and professional life, Americans tend to migrate to small cities and rural communities. Therefore, the population loss among those in their twenties is partly regained by adults in their thirties who bring technical and leadership skills back to their rural communities and focus on raising their children.

Rural/urban population change from net migration and U.S. median household income



Source: Net migration estimates from the University of Wisconsin-Madison and income from the Current Population Survey.

Such a trend yields a positive migration pattern to rural areas by adults in their late 30s, and also in their mid- 40s and 50s, when median household incomes reach their peak. This pattern further increases among early retirees (ages 65-69), especially focused on areas with features such as natural resource access and healthcare options. The migration of rural residents indicates the critical role that quality of life, access to healthcare, effective schools, and other vital services can play in sustaining rural populations and fostering long-term rural prosperity.

Overall, the rural population is shrinking for the first time on record and it is not just due to the migration of young adults to urban areas. Fewer births, increased mortality among working-age adults, and an aging population are health factors that are driving numerous other aspects of rural social and economic life. For example, many communities are challenged in terms of access to medical services and primary care due to their relative remoteness from population centers. The recent rise in rural mortality rates among adults ages 35-54 can be tied to a dramatic increase in mortality from natural causes - e.g., heart, liver, and respiratory diseases, or cancer - and to the opioid epidemic.

While the opioid epidemic affects both rural and urban areas, the rise in natural cause mortality is largely a rural problem and represents a growing threat to quality of life and rural prosperity. If these trends are left unaddressed, the rural population will not only continue to decline but the dependency ratio will increase.

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As a result, the number of people likely to be not working (children and retirees) will overwhelm the number of people who are likely to be wage earners (working-age adults) and it will become increasingly difficult to achieve a high quality of life.

Objectives & Recommended Actions

1. **Advance Educational Opportunities** – Create a strategy for public-private partnerships to complete the connection of all rural Pre-K through Grade 12 and Community/Technical Colleges to high-speed, high-capacity internet to maximize the use of digital learning, especially the deployment of curricula for STEM subjects most relevant to rural economies such as agriculture, manufacturing, military, and business. These opportunities should include the Department of Agriculture, Department of Labor, and Department of Education, and other pertinent agencies aligning on implementation along with key stakeholders. A primary activity should be conducting outreach and designing the optimal set of roles for various government agencies and private sector organizations.

Photo credit: Getty Images

2. **Modernize Healthcare Access** – Assure that the policies and roles of the federal government support access to medical treatment facilities, including health clinics, telemedicine, vocational and medical rehabilitation facilities, dental clinics, assisted living, nursing homes and memory care facilities. Better coordination of the sources of capital that support high-need providers in rural areas is needed, including current federal funds and potential new private funds. Implementation of best practices can be identified and facilitated to enhance access to primary care and specialty providers through telemedicine. Improved access to mental and behavioral care, particularly access to prevention, treatment, and recovery resources is vital to address the nationwide opioid crisis and other substance misuse in rural communities. The Task Force recommends a multi-agency approach to align federal policies and programs for rural healthcare modernization within the Department of Health & Human Services, Department of Veterans Affairs, Department of Housing & Urban Development, Department of Interior, Department of Agriculture and other related agencies. The objective would be to prioritize actions and streamline current funds and financing tools of federal, state, tribal and local governments, as well as private sector organizations. Within existing resources, a more efficient deployment of current taxpayer resources can more effectively address the rural healthcare needs.

3. **Innovate Options for Rural Housing** – Develop a set of shared best practices for increasing homeownership, reducing homelessness in rural communities, and building robust community infrastructure. Such practices should include recommendations for federal, state, tribal and local action to strengthen investments in rural housing and provide technical assistance. The Task Force recommends options such as the Department of Housing & Urban Development, Department of Veterans Affairs, Department of Agriculture, Department of Labor, and Department of Education jointly evaluating

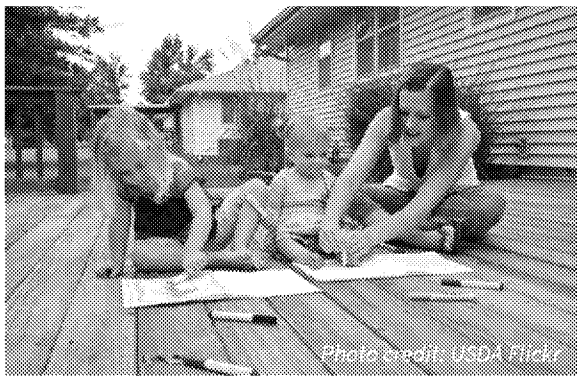
Photo credit: USDA Flickr

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federal rural housing policies and programs, and targeting existing resources to best support sustainable housing in rural communities. To optimize rural housing options for the workforce needed in the current and future economies, private sector organizations' resource deployment to rural areas can also be incentivized.

4. **Improve Transportation Options** – Targeted investment within current programs that are outcomes-driven can further address the disproportionately high fatality rate on rural roads, including multi-agency collaboration on policies. States and local transit systems can save tax dollars and more effectively serve rural citizens' mobility needs to job sites, education centers, and healthcare facilities, by streamlining federal policies, programs, and funds that support rural public transit systems. Interagency coordination could include the Department of Transportation, the Department of Health & Human Services, the Department of Labor, and other relevant agencies better aligning policies for rural transit services based on locally-created rural community economic development strategies.

5. **Modernize Rural Utilities** – Advance and expedite the important infrastructure modernization and technology investments that can be prioritized for rural communities' electric power and water systems. Existing resources can be utilized to further invest in rural communities' water infrastructure. For smart grid deployment, enhancements to federal financing programs at the Department of Agriculture can be executed in further conjunction with the Department of Energy. In addition, the Federal Communications Commission and the Department of Agriculture can further coordinate programs on the installation of high-speed e-connectivity in rural communities.

Photo credit: Getty Images

6. **Improve Community Resiliency Planning** – Align federal economic development policy and resources in a manner that enhances rural prosperity. The Task Force recommends that a strategy is built out that includes best practices in site selection, workforce development, utility and transportation infrastructure, and use permitting. It could also encourage community resilience at the local level by requiring that federal planning strategies, such as the Economic Development Administration's Community Economic Development Strategies (CEDS), include identification of strategic industries for rural regions and plans for disaster preparedness and recovery. For example, coordination between the various agencies and programs of the Department of Agriculture can enhance the effectiveness of all federal agencies' efforts to support economic growth and resiliency in rural America, including CEDS, which can be used to drive federal investment in rural areas per these locally-created prosperity plans.

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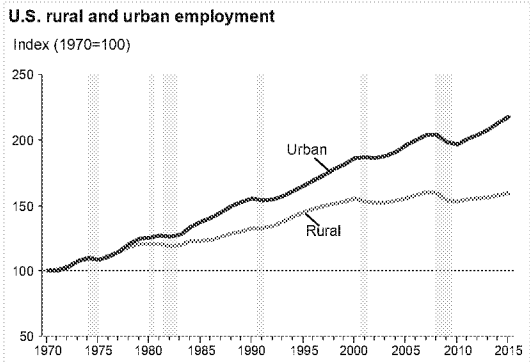
Photo credit: USDA Flickr

Call to Action #3: Supporting a Rural Workforce

To grow and prosper, every rural community needs job opportunities for its residents, and employers need qualified individuals to fill those needs. This requires identifying employment needs, attracting available workers from urban and rural centers alike, and providing the workforce with training and education to best fill the available needs. There are many opportunities to partner with local businesses and organizations to identify gaps, to work with all levels of educational institutions to provide career training and development, to fine-tune existing training programs, and to grow apprenticeship opportunities to develop the required workforce. Providing rural communities, organizations, and businesses a skilled workforce with an environment where people can thrive will grow prosperous communities.

Since 1970, rural employment has grown slower than in urban areas (60 percent compared with 120 percent in urban areas), according to the Bureau of Economic Analysis. Rural employment recovery was especially slow after the Great Recession (2007-09), a fact concerning to future rural prosperity. Notwithstanding, there were 19 million workers in Rural America in 2016, which was approximately 13 percent of the U.S. total.

Certain industries, such as agriculture, forestry, mining, and manufacturing, are especially important to rural America and all account for larger shares of employment and earnings in rural compared to urban areas. The Bureau of Economic Analysis estimates that farm employment (both self-employed farm operators and their hired workers) accounted for about 6 percent of all nonmetro employment in 2015, compared to less than 1 percent in metro areas. Additionally, farm employment leads to downstream jobs, which can lead to rural economic growth. While production agriculture hires 1.2 million workers annually according to the U.S. Census Bureau, farmers face instability due to the lack of available American citizens and lawful permanent resident workers to fill these jobs. This has led some farmers to hire illegal foreign labor and the underutilization of the H-2A visa program to hire legal foreign workers. When farmers face this instability, they



Source: Bureau of Economic Analysis. Employment is measured as number of jobs; rural/urban status is based on 2013 metropolitan designations. Gray bars indicate recessions.

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often elect to downsize their operations or plant more mechanized commodities, which negatively impacts the local labor market.

Turning to manufacturing, the Bureau of Economic Analysis reports that the industry employs a larger share of the nonmetro workforce compared to the metro workforce (11 percent versus 6 percent in metro areas). Additionally, other more consumer-oriented services have similar shares of jobs and earnings in both nonmetro and metro areas, as does the recreation sector.

Lastly, healthcare and the ability to recruit and retain healthcare providers and facilities is also critically important to rural prosperity and unfortunately the slower overall population growth has historically detracted from an overall growth in total healthcare employment.

Photo credit: Getty Images

Within these sectors and others, there is much opportunity for growth in rural America. This is shown by evaluating occupations employing 150,000 or more people in rural counties in 2015. Seven of these 33 occupations were projected by the Bureau of Labor Statistics to grow by 10 percent or more nationally between 2014 and 2024 (see table). The top four occupations are all healthcare-related: personal care aides; nursing, psychiatric, and home health aides; licensed practical and licensed vocational nurses; and registered nurses. Their educational requirements range from no formal credential (for personal care aides, who earned a median salary of $21,920 per year in 2016, and whose employment is projected to grow by 26% nationally over ten years) to a four-year college degree (for registered nurses, who earned a median salary of $68,450 per year in 2016, and whose employment is projected to grow by 16% nationally over ten years). By contrast, rural occupations serving a national or international market may more nearly mirror the national growth rate. For example, customer service representatives, an occupation projected to grow by 10% in ten years, may be employed in rural call centers serving broader markets. Business accountant and auditor employment is projected to grow by 11% over ten years at the national level, including rural businesses that are tied to national product markets.

Occupations with 150,000 or more rural workers and with projected national growth rates of 10 percent or higher, 2014-2024.

Occupation	National Job Growth, 2014-24	National Median Wage, 2016	Education Required	Experience Required	On-The-Job Training Required
Personal care aides	26%	$21,920	No formal credential	None	Short-term
Nursing, psychiatric, and home health aides	24%	$25,159	High school diploma or equivalent	None	Short-term
Licensed practical and licensed vocational nurses	16%	$44,090	Post-secondary non-degree award	None	None
Registered nurses	16%	$68,450	Bachelor's degree	None	None
Construction laborers	13%	$33,430	No formal credential	None	Short-term
Accountants and auditors	11%	$68,150	Bachelor's degree	None	None
Customer service representatives	10%	$32,300	High school diploma or equivalent	None	Short-term

Sources: BLS Employment Projections (https://www.bls.gov/emp/); Occupational Employment Statistics (https://www.bls.gov/oes/); and the 2015 and 2016 American Community Surveys.

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Moreover, it is necessary to look globally as a means for job creation. U.S. agricultural exports support output, employment, income, and purchasing power in both the farm and nonfarm sectors. The Department of Agriculture's Economic Research Service estimates that in 2015 each dollar of agricultural exports stimulated another $1.27 in business activity. Additionally, every $1 billion of U.S. agricultural exports in 2015 supported approximately 8,000 American jobs throughout the economy. Total agricultural exports in 2015 supported 1,067,000 full-time civilian jobs, which included 751,000 jobs in the nonfarm sector, according to the Department of Agriculture.

Photo credit: Getty Images

There are significant opportunities for the rural workforce to prosper and grow, but reviewing available data and identifying gaps to match curricula and training programs are required to best serve employer needs. Successful workforce development strategies strive to create well-educated and skilled individuals whose qualifications meet the requirements of the contemporary economy. Career mapping within educational systems – beginning at K-12 and continuing through higher education – is necessary to help prepare the workforce of the future to fit rural economies. Many rural communities perform well relative to urban areas in many measures of school quality and in the rate of college attendance among their young adults, which is more difficult to achieve for the most remote rural areas and for those with relatively large shares of low-income residents. Ultimately, strong primary and secondary schools that focus curricula and offer strong career guidance are fundamental to generating a robust and ready workforce needed in rural America.

As we develop the workforce of the future, it is also important to prepare current, available workers to fill both existing and newly created jobs. Higher education is becoming increasingly unaffordable and many colleges and universities fail to help students graduate with the skills necessary to secure high paying jobs in today's workforce. Along with fine tuning available public and private training programs, expanding apprenticeships may enable more Americans to obtain relevant skills and high-paying jobs. Apprenticeships provide paid, relevant workplace experiences and opportunities to develop skills that are valued by employers.

Objectives & Recommended Actions

1. **Connect Rural Skillsets to Jobs of the Future** – Before we can provide suitable resources, we must identify existing job demands, skillset gaps, and community needs. A robust interagency effort is needed to study current gaps and job demands in all sectors to better specialize our educational and training efforts. We recommend that interested agencies complete a study which clearly identifies these gaps. That survey will then be used to promote curricula rationalization methods in K-12 education, secondary educational institutions, and technical training programs. This effort will better link educational and career guidance given at an early age to local economic needs. We must also focus on developing universally adaptable skills that provide flexibility in a rapidly changing environment. This research is the integral first step to best serve rural communities and ensure we are training for jobs that are needed, but also provide an adaptable workforce as new skillset are needed.

2. **Promote and Expand Apprenticeship Programs** – The Task Force identified clear needs in the healthcare and trade industry sectors while rural businesses and communities struggle to find talent

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to fill jobs in these sectors. The Task Force recommends that federal agencies promote and assist local businesses in the expansion of apprenticeship programs. In the near term, we support creating an interagency workgroup to identify priorities and develop apprenticeship programs for rural America.

3. **Connect Veterans to Underutilized Training Programs** – Despite a clear effort to reach these available and talented individuals that are ready and willing to work, programs are not easily accessible and often siloed within the federal agencies; therefore, not maximizing the potential talent lying within this population. The federal government must do better to connect, streamline, and eliminate duplication across the agencies to better reach and serve veterans. We recommend an interagency inventory of available veterans' programs, a focused effort to eliminate duplication by creating a one stop shop for better customer service, and implementing metrics to measure veterans' access and use of training programs.

Photo credit: USDA Flickr

4. **Improve Rural Access to Education and Training** – Job opportunities, training programs and educational materials are not easily accessible by businesses and jobseekers. As we work to eliminate interagency silos, there are ways to better market the resources already available to rural populations using existing resources.

    a. **Improve Interagency Collaboration** – The Department of Education and the Department of Agriculture should strengthen the collaboration between the two departments, their stakeholders and partners to improve access to quality education in rural communities and create opportunity for children in rural America. The interagency coordination will (1) increase investment within existing resources for a wide range of daycare, primary, elementary, and secondary education facilities, including traditional public and charter schools, (2) improve the access of rural communities to resources provided by both Departments, (3) make capital available through USDA for strengthening existing or constructing new educational facilities, and (4) provide capacity building and technical assistance.
    b. **Catalog Federal Training Programs** – Federal government training programs should be catalogued on a single online platform to improve access to these materials and programs.
    c. **Encourage Interagency Use of Federal Infrastructure** – The Department of Agriculture has a broad physical network with local and regional offices across America. We encourage all federal agencies to partner with the Department of Agriculture to house certain educational materials or host periodic training programs in those local offices.

5. **Ensure Access to Lawful, Agricultural Workforce** – Production agriculture is often a key economic driver in rural communities. Many on-farm jobs are seasonal and very physically demanding. Farmers often have difficulty finding American citizen and lawful permanent resident workers to fill these jobs. This can lead some farmers to scramble to find workers to plant, prune, and harvest fruits and vegetables or to tend to livestock. As labor instability grows, seasonal farmers are increasingly turning to H-2A visa program to ensure that their foreign-born workers are working legally in the United States. The inefficiencies and administrative burden of the H-2A program are well-communicated by farmers. The White House is addressing farmers' concerns through an interagency effort to implement policy and regulatory changes to improve the program H-2A program. The goal of this initiative is to ensure that farmers have access to the lawful workforce that is needed.

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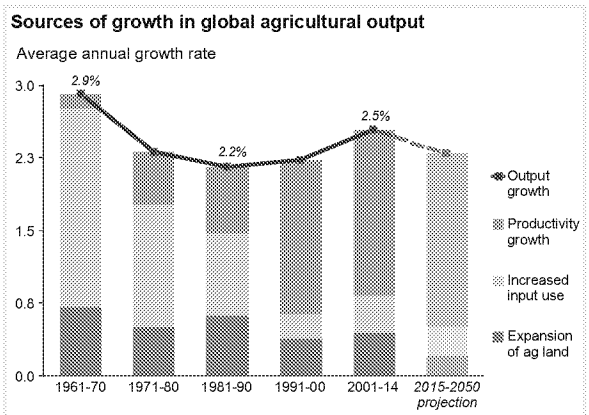
Call to Action #4: Harnessing Technological Innovation

By 2050, the U.S. population is projected to increase to almost 400 million people, and rising incomes worldwide will translate into historic global growth in food demand. To feed a hungry world, we will need to harness innovation to increase output across American farmlands. In addition to increased crop yields, technological innovation can improve crop quality, nutritional value, and food safety. Innovations in manufacturing, mining, and other non-agricultural industries can enhance worker efficiency and safety. At the core of these developments that will further grow the rural economy is the expansion of STEM education, research, regulatory modernization, and infrastructure. Leveraging these innovations in an increasingly data-driven economy will also require further development of rural data management capabilities.

From agriculture to manufacturing to mining, innovative technologies and practices drive long-term growth and prosperity in rural America. The United States is the world leader in agricultural production and technology, and rural America is home to many of the best, and most innovative farmers in the world. Over the past 30 years, U.S. agricultural productivity has increased by nearly 50 percent, and by almost 14 percent in the 21st century (Wang et al., 2017). High productivity has enabled U.S. agriculture to be the world's most dependable source of food surpluses to help feed a hungry world.



Source: USDA Economic Research Service, *International Agricultural Productivity* data product.

According to the U.S. Census, the U.S. population is projected to increase to 400 million people by 2050. As the world's leader in farm production and innovation, the United States can leverage emerging agricultural technologies and innovative practices to meet the economic opportunity and the humanitarian imperative. Further, while working to meet this challenge in just 32 growing seasons, it is critical that productivity growth not rely on more cultivated land, water, or energy, but instead harness the power of innovation and technology. The U.S. contributes to global food security not only by being a breadbasket, but also through advances in food, agricultural and nutrition sciences, and their world-wide dissemination.

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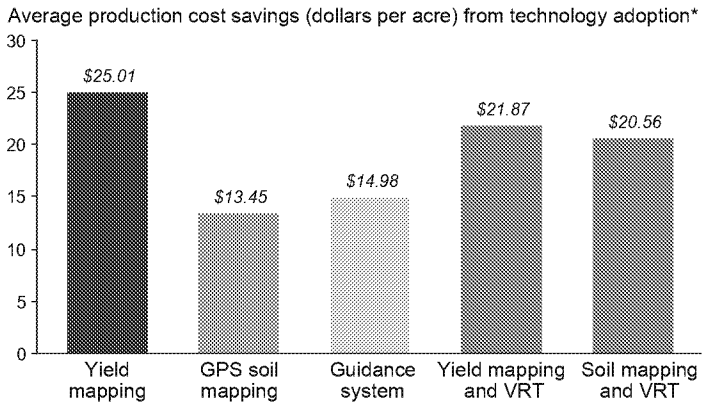
Enabling technological innovation in agriculture will improve the efficiency of the American farmer, increase sustainable use of American resources, and enhance the quality of American agricultural output, all while creating new American jobs and increasing rural incomes. Over the past two decades, American farmers have led high rates of adoption of technologies including automated farm equipment, satellite and aerial imagery, variable rate technology (VRT), genome editing and genomic selection, and high-speed internet.

Corn production cost savings from precision agriculture technology adoption



GPS = global positioning system. VRT = variable rate technology.
*Per acre production costs include expenses for seed, fertilizer, pesticides, paid/unpaid labor, machinery expenses (not capital investments), fuel and repairs, and custom services.
Source: USDA Economic Research Service model estimates using data from USDA, 2010 Agricultural Resouce Management Survey, phases II and III.

Precision agriculture technologies that optimize input application using VRT are playing an increasing role in farm production. To determine the optimal application of inputs, farmers require data on field conditions to calibrate production practices. Technologies such as global positioning system (GPS) guided machinery, soil and yield mapping, embedded sensor networks, and aerial imagery increase capabilities to collect data with sufficient temporal and spatial resolution. The addition of GPS technologies on farm vehicles has enabled greater automation of routine farm tasks, and provided field operators access to timely, accurate crop data to improve seeding of field crop rows. Integrated networks of soil sensors that provide data on moisture and nitrogen fixation, satellites, and unmanned aircraft systems (UAS) equipped with multispectral sensors provide maps of crop yield variability. VRT enables farmers to increase crop yields, while reducing water usage, and minimizing the need for fertilizer, chemicals, and pesticides.

If the ease of use and cost of implementation of precision agriculture technologies can be improved, they have the potential to boost profits for more producers as well as yield environmental benefits. Utilizing key precision farming technologies can produce a 3-18 percent boost in crop yield via targeted fertilizing, planting, spraying, and irrigation, according to Goldman Sachs Global Investment Research. In addition, case studies conducted by AgPixel found there are savings to be gained with better use of products such as nitrogen, herbicide, and water that can add up to $28 per acre. Such gains could mean the difference between successes or failure for many agriculture-based businesses.

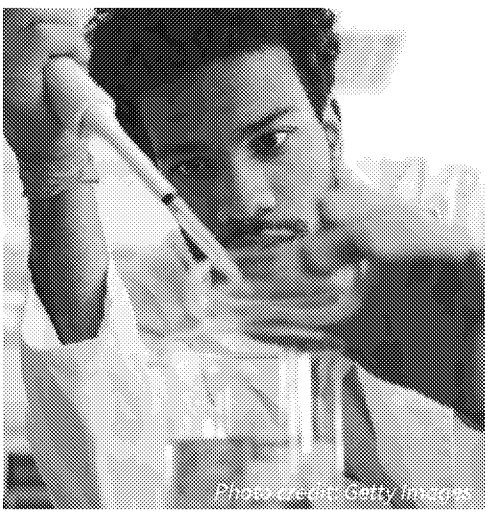


Photo credit: Getty Images

Biotechnology is another area of U. S. leadership, being a sector that has driven innovation in fuels, chemicals, manufacturing, and agriculture. In 2016, biotech crops were grown on over 170 million acres in the United States, including over 92% of corn, soybean and cotton total acreage, according to the Department of Agriculture's National Agricultural Statistics Service. Globally, the biotechnology sector is a driver of the "fourth industrial revolution," and presents an incredible opportunity for American farmers and rural communities to thrive at the forefront of innovation. Scientific advances in biotechnology from universities have helped create world class firms that export superior crop seed and other biotech innovations in world markets. Advancements in genome editing and genomic selection have produced favorable crop and livestock traits,

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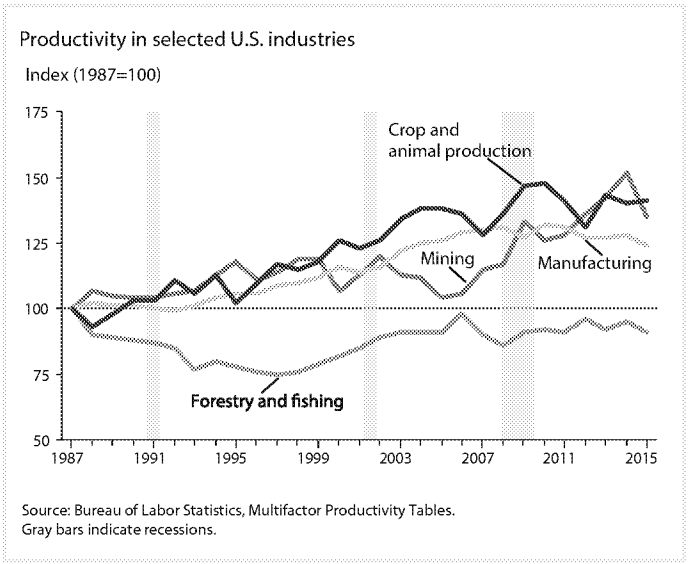
including resistance to drought, disease, and heat; enhancements to nutritional value; and increased resource efficiency. Those technologies, combined with public and private research and development investments, have enabled U.S. farmers to increase the supply and quality of crop and livestock commodities using fewer resources and at lower costs of production.

Productivity improvement in primary industries can increase the profitability, competitiveness, and growth of upstream manufacturing sectors such as food manufacturing, textiles, and wood products. It can also create jobs in the processing industries - transportation and finance - which are needed to support those sectors. However, productivity growth has slowed over the past three decades, especially in the forestry and fisheries sector. Employment in the mining sector, which accounts for a higher share of employment in rural areas compared to urban centers, has trended downward in recent years. In general, studies have found an urban innovation advantage over rural areas in non-manufacturing sectors, especially service sectors.



Non-agricultural rural industries that have shown high levels of innovation include the telecommunications and commercial electronics industries (Wojan & Parker, 2017). With these markets leading the way in rural innovation, the need for high-speed internet access in rural America is heightened.

Photo credit: Getty Images

Prospects for innovation in agricultural and food industries are evidenced by their attractiveness to private-sector venture capital. Recent years have seen a sharp increase in venture capital directed at these sectors, especially for information technology and biotechnology innovations. According to AgFunder, during 2014-15, venture capital funds invested at least $6.9 billion in a range of agriculture-related innovations, including precision agriculture and e-commerce food marketing. Most of these venture capital investments have been directed at U.S. firms, but some have involved major investments with firms located in Europe, Israel, China, and elsewhere.

Federal and state research institutes use a variety of means to collaborate with the private sector. Some of the venture capital startups are spinoffs from innovations developed in these laboratories or through joint research efforts with private firms. Other major contributors are the more than 100 federally-funded U.S. Land Grant Colleges and Universities, which are key providers of STEM training as well as innovators across many sectors, and have contributed to U.S. world leadership in many high-technology fields. Innovations emanating from these institutions find their way into industries through scientific publications, patents, direct university-industry partnerships, and STEM-trained graduates. Furthermore, these institutions help create internationally-competitive firms and industries.

Many of the innovative and high-tech advances discussed above emanate from educating rural Americans. Ensuring that all rural Americans have access to educational opportunities is critical to enhancing

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productivity and competitiveness throughout America. Educational achievement highly correlates with measures of regional economic prosperity and recent data show that rural Americans are increasingly well educated. According to the U.S. Census Bureau, only 15 percent of rural adults ages 25 and older do not have a high school diploma, and nearly 3 out of 10 rural adults now have an associate's or bachelor's degree or higher. These data suggests rural America is well-positioned to ensure the flow of new technologies and innovations that are required for rural prosperity.

Photo credit: Getty Images

Despite American leadership in technological innovation in agriculture, federal regulations are currently limiting both precision agriculture and biotechnology applications. For example, UAS can provide aerial crop surveys with greater resolution than satellite imagery, and at a frequency desired by farmers. However, the Federal Aviation Administration regulations on commercial UAS operations limit the ability of farmers to conduct these surveys for precision agriculture applications.

On the biotechnology front, better coordination of the Department of Agriculture, Environmental Protection Agency, and Food and Drug Administration regulations on genetic modification of crops and livestock is needed to reduce barriers to commercialization of safe, beneficial and improved genetically engineered entities. Our regulatory system must protect public health, welfare, safety, and our environment while promoting economic growth, innovation, competitiveness, and job creation.

In addition, the growing rural needs for large data collection and processing require the necessary communications infrastructure to handle the quantities of data needed. Big Data is proliferating across all aspects of the global agricultural supply chain and will require policy development that protects farmers' privacy, U.S. companies, and U.S. national security interests, if the information revolution is to be fully realized in rural America.

Objectives & Recommended Actions

1. **Coordinate Federal Farm Production and Food Safety R&D** – To sustainably feed the world, ensure a safe food supply, and keep families on the farm, modern science and technology must be applied. The U.S. needs research and development, as well as a regulatory system that promotes rather than discourages innovation and discovery. The National Science and Technology Council (NSTC) should extend the charter of the Subcommittee on Food and Agriculture to coordinate strategies across the federal government to advance innovation in food and agriculture R&D. The Task Force recommends that the subcommittee catalog, coordinate, and leverage ongoing investments in technology to drive innovation in rural America and deliver safe, transformative technologies to farmers and consumers. The subcommittee should also develop an R&D strategy that identifies and creates opportunities for the technology sector to invest in rural communities.

2. **Improve Rural Management of Big Data** – The U.S. government needs a plan and a stronger vision for how big data can be better leveraged to revolutionize the agricultural sector. The NSTC Subcommittee on Food and Agriculture should develop best practices for big data management in agricultural applications.

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3. **Increase Public Acceptance of Biotech Products** – The Department of State, the Department of Agriculture, and other relevant agencies should develop a communications strategy to increase acceptance of biotech products and open and maintain markets for U.S. farmers abroad. To complement this strategy, the U.S. Trade Representative should initiate interagency deliberations to identify an international strategy that removes unjustified trade barriers and expands markets for American products.

Photo credit: USDA Flickr

4. **Develop a Streamlined, Science-based Regulatory Policy for Biotechnology** – The federal government should continue efforts to modernize the federal regulatory system for biotechnology products. These efforts will improve transparency, coordination, and predictability of the system and support public confidence by assessing products in a risk-based manner, providing predictable pathways for commercialization. These efforts should be continued to ensure the success of consumers, farmers, and their products. More efficient and effective communication must be employed to build evidence-based confidence in the safety of products for health and the environment. It is critical that these improvements: (1) maintain high standards that are based on the best available science and that deliver appropriate health and environmental protection; (2) establish transparent, coordinated, predictable, and efficient regulatory practices across agencies with overlapping jurisdiction; and (3) promote public confidence in the oversight of the products of biotechnology through clear and transparent public and diplomatic engagement. The Task Force recommends that the Administration:

    a. **Coordinate Federal Regulation of Biotechnology Products** – Reaffirm strong support of the Coordinated Framework for the Regulation of Biotechnology, and the corresponding National Strategy for Modernizing the Regulatory Systems for Biotechnology Products.
    b. **Coordinate Interagency Action Through the Office of Science and Technology Policy** – Endorse and empower the Biotechnology Working Group, led by the White House Office of Science and Technology Policy, to continue cooperation across relevant government agencies and improve science-based regulatory approaches directed in 2015 by the White House memorandum to federal agencies, including: updating science-based regulations navigable by small and mid-sized innovators and promoting understanding of how a risk- and science based regulatory approach effectively protects consumers.
    c. **Expedite Commercialization of Biotechnology Products** – Create a forum led by the White House Office of Science and Technology Policy that connects regulators with the funding and R&D agencies to increase awareness and speed the safe commercialization of novel biotechnology products.

5. **Enable Rural Uses of Unmanned Technologies** – Federal regulations currently restrict many agricultural uses of unmanned aircraft systems (UAS). The FAA should expedite regulatory waiver approvals for low-altitude UAS operations in rural environments. State and local governments should be enabled to propose increased UAS operations in their jurisdictions to be considered by the FAA for streamlined regulatory waiver approvals. These could include rural communities seeking reduced restrictions on UAS operations for precision agriculture applications and improved production monitoring capacity.

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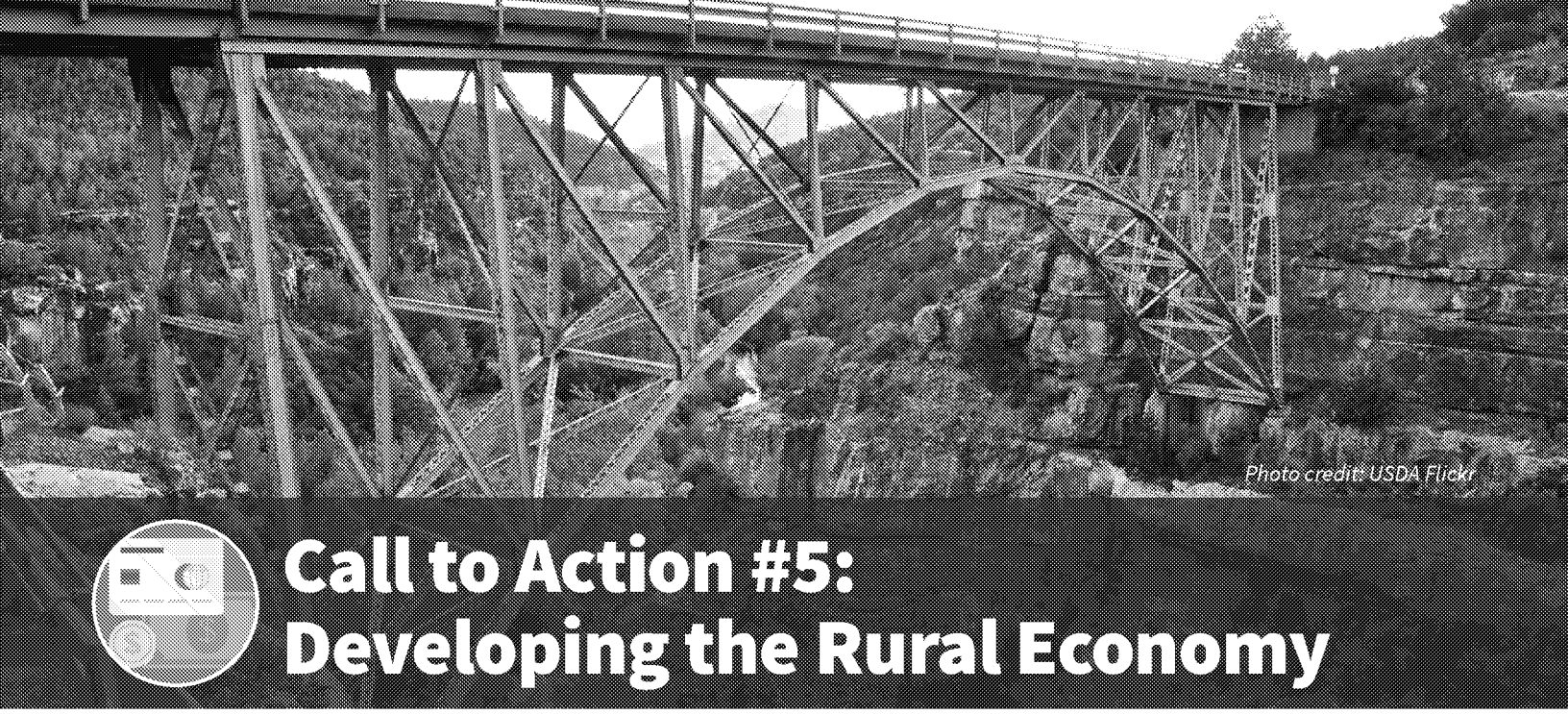
Photo credit: USDA Flickr

Call to Action #5: Developing the Rural Economy

Infusing rural areas with stronger businesses and agricultural economies empowers America. Expanding funding options to increase the productivity of farmers and ranchers will lead to the enhanced viability and competitiveness of rural America. By promoting innovative farm technologies, energy security, recreation, agritourism and sustainable forest management, communities will be empowered to leverage the bounties of rural America. Investing in rural transportation infrastructure is needed for carrying more "Made in America" products to markets at home and abroad, and boosting our country's global competitiveness. Reducing regulatory burdens and attracting private capital will support our ultimate mission of empowering Rural America to feed the world.

Economic development is enhanced by a supportive environment for business: an environment that encourages innovation and leverages existing resources. Rural areas have especially high concentrations of natural resource-related industries and manufacturing, providing considerable opportunity for meeting productivity goals. Additionally, the large number of baby boomers still to retire represents significant potential growth for many rural places. However, these opportunities may also introduce challenges. The steady decline in the employment shares of farming, mining, and manufacturing over the past half century is due in part to labor-saving productivity. Without substantial growth in the demand for these products, rapid productivity increases may further depress rural employment in these sectors. The challenge for rural economic development is to select strategies that encourage both expanding markets for existing products and exploring possibilities of new products that might require new types of jobs and skills.

Expanding markets through trade is one strategy for generating and sustaining economic growth. Programs and policies that promote overseas market development, such as assistance in understanding foreign market requirements and establishing networks, exist in many sectors and at both the federal and state level. More generally, U.S. and global trade are greatly affected by the growth and stability of world markets, including changes in world population, economic growth, and income. Other factors affecting trade are global supply conditions, changes in exchange rates, domestic support policies, and

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both tariff and non-tariff protections. Trade agreements generally increase trade, alter relative prices, and can change production systems and supply chains. Although increased access and support for export markets can be a growth opportunity for rural America, they can also increase competition from imports. However, the effects of trade may not be distributed evenly across regions or sectors. For example, some manufacturing industries are clustered in rural rather than urban areas. Food manufacturing, machinery manufacturing, and wood product manufacturing jobs account for larger shares of rural manufacturing jobs than urban manufacturing jobs, while computers, electronics, and chemical production account for larger shares of urban manufacturers.

In 2015, American farmers and ranchers relied upon exports for 19 percent of farm income, according to the Department of Agriculture. In 2016, their exports totaled over $139 billion, making the United States the world's top agricultural exporter. Export success supports livelihoods of many family farms around the country and helps to provide revenue to support schools, public services, small businesses, and millions of jobs for rural America that are outside agricultural industries.

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Since the agri-food sector accounts for a larger share of nonmetro employment than of metro employment, growth in U.S. agricultural exports is of greater relative importance to the economic prosperity of nonmetro communities. In 2017, a report using a computable general equilibrium (CGE) model explored the economic effects of a hypothetical 10-percent increase in foreign demand for U.S. agricultural exports (Zahniser et al. 2017). This demand shift was found to result in a 6.7-percent increase in the volume of such exports, worth $9.7 billion at 2013 prices, and a net increase in total U.S. employment (all economic sectors) of about 41,500 jobs—above and beyond the nearly 1.1 million full-time civilian jobs that U.S. agricultural exports currently support. Some 40 percent of these new jobs would be created in rural (nonmetro) counties. The agri-food sector's share of regional employment is the main determinant of the percentage change in total regional employment in this simulation. Most parts of the agri-food sector (i.e., production agriculture plus food and beverage manufacturing) would see an increase in employment, while employment in other trade-exposed industries - most notably non-food-and-beverage manufacturing and mining - would decrease.

Growth in mining, especially shale gas and oil production, may also offer economic opportunities in rural areas, especially if energy prices rise. While shale gas and oil production has grown rapidly since 2005, growth in some production areas has slowed or reversed due in part to declining prices. However, other areas where production is still expanding may continue to experience rapid growth.

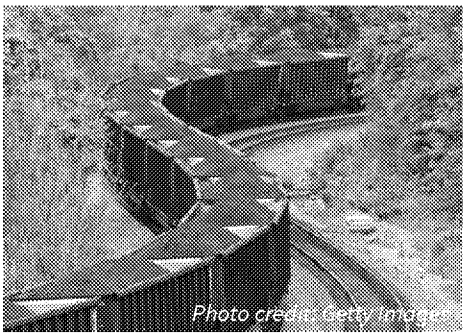
Photo credit: Getty Images

Movement of agriculture, mining, forestry, manufactured, and military freight would not be possible without transportation connectivity coast-to-coast, border-to-border, and between metropolitan areas. Rural America is home to many of the nation's most critical transportation infrastructure assets, including 444,000 bridges, 2.98 million miles of roadways, and 30,500 miles of Interstate highways, according to the Department of Transportation. More than half of all public road miles are locally-owned rural roads. Railroads moved 1.7 million tons of American freight in 2015. By 2045, the United States Department of Transportation projects total freight on all modes (rail, truck, air, water, pipeline) to reach 25 billion tons, valued at $37 trillion. The synergetic relationship between transportation investment and

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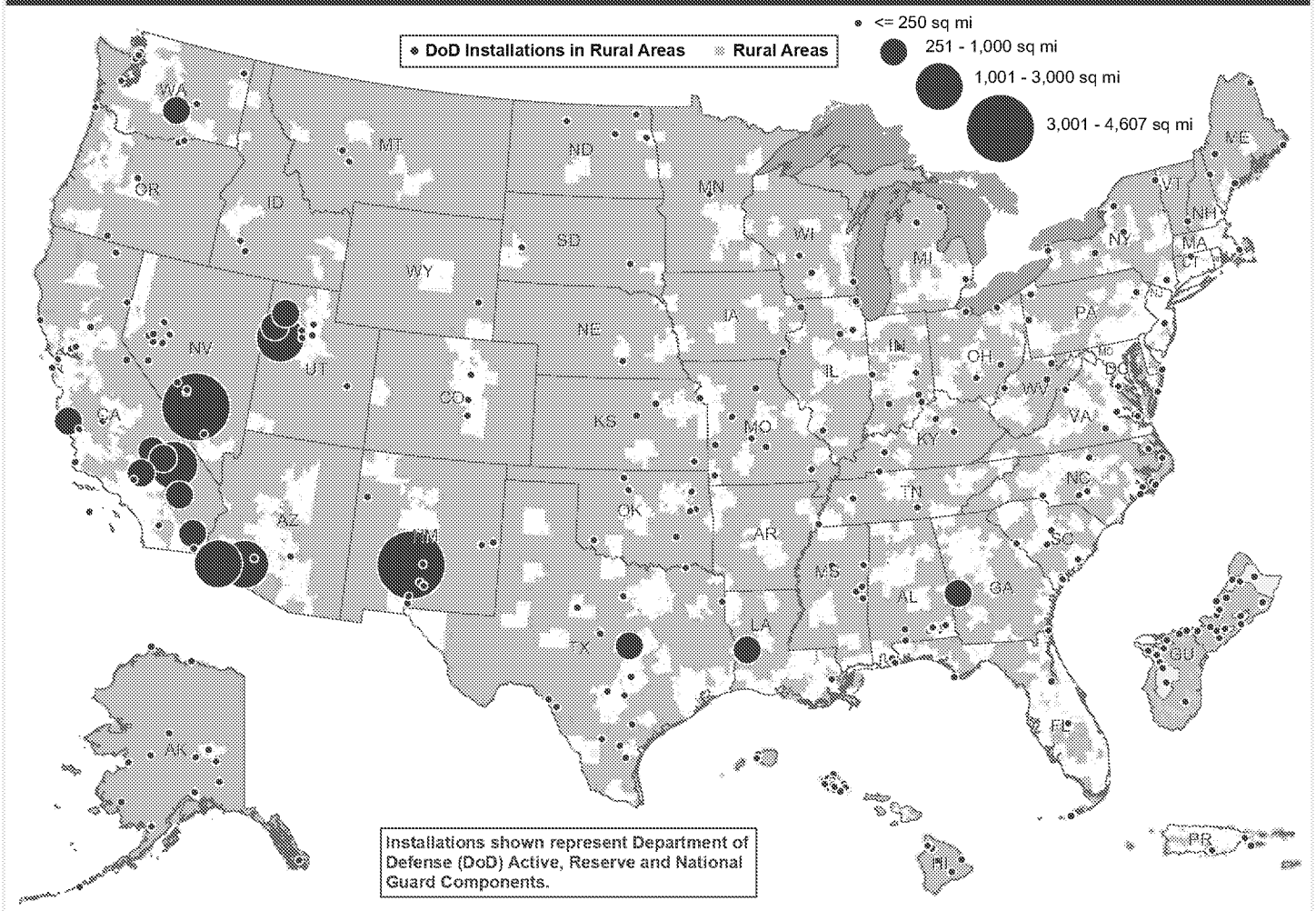
economic development is based on accessible intermodal connections and sufficient infrastructure capacity that can efficiently move freight and people. Transportation also has a broader role in shaping development patterns and impacting location decisions of businesses and people. Rural transportation accessibility and connectivity are critical to transportation-dependent business sectors in rural areas. The nation's rural transportation network provides the first and last link in the supply chain from farm to market, while supporting the tourism industry, enabling the production of energy, and supporting military movements.

Military installations and contract spending of the Department of Defense are other important economic drivers in many rural locations. Rural manufacturing facilities and vendors are buoyed by the Department, providing goods and services for our nation's military forces. According to the Department of Defense, almost half of all their service contract spending occurs in rural areas, to the tune of $5.4 billion dollars in Fiscal Year 2015. The opportunity to increase such an economic driver is substantial as the total rural share of all types of contract spending was only about $10 billion of the total $273 billion.

Department of Defense Installations in Rural Areas (337 total)



This map is shown at the National Scale. Defense installations that appear to be in Non-Rural Areas at the National Scale are included in Rural Areas when zoomed in to the County Level. Rural Areas are defined as US Counties in Non-Metropolitan Statistical Areas (MSAs) that also fall within US Census Tracks that have a Rural-Urban Commuting Area (RUCA) Code of 4-10. All data are current as of Fiscal Year 2015 and was acquired / processed from all DoD Components and the Washington Headquarters Services (WHS).

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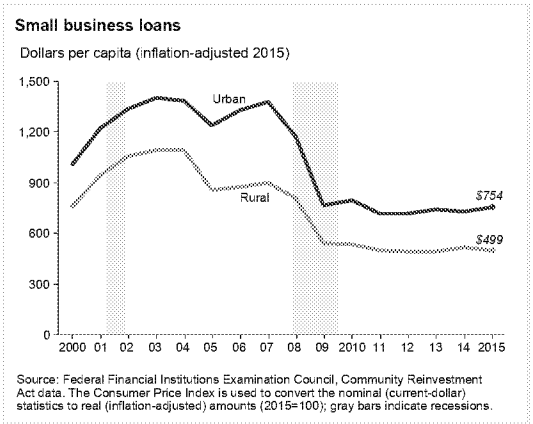
Photo credit: Getty Images

In addition to military installations supported by rural communities around the country, the Department of Defense, in cooperation with the states, maintains over 3,500 National Guard and Reserve centers mostly in rural areas to train military forces and maintain equipment. These centers also serve as local disaster relief and support centers for rural communities. Defense also relies on thousands of vendors and manufacturing facilities in rural areas to serve the defense industrial base by providing goods and services for our nation's military forces. Defense also has over 5,000 formerly used defense sites, mostly in rural areas, awaiting remediation that would allow for eventual economic redevelopment by local communities.

In Fiscal Year 2015, more than 42 percent of Active Duty enlisted personnel came from non-urban areas.[2] In addition, veterans are overrepresented in rural America by almost 20 percent and can provide valuable and needed skillsets. A huge opportunity exists for rural communities to reach these key populations. According to the American Community Survey, in total, the share of all post-9/11 veterans residing in rural areas in 2015 was 11.9 percent while the share of all pre-9/11 veterans residing in rural areas was 15.5 percent. Veterans are not evenly spread across the rural-urban landscape, either. Many areas with post-9/11 and combined veteran concentrations were near military installations, reserve centers, or training areas, where transitioning veterans are most likely to remain once they leave military service.

Access to capital to support investments in entrepreneurship, innovation, and growth may be more daunting in rural areas where fewer alternatives to conventional bank loans exist, relative to urban areas, which also have easier access to venture capital, angel investing, and emerging crowdsourcing models. Lending of all types to small businesses is consistently lower in rural areas compared to urban areas, and has yet to recover from the Great Recession of 2007-09. Because new, small firms are the major source of employment growth in both urban and rural economies, limited credit availability today may adversely affect near-term and long-term job growth. For example, recent research suggests that smaller, independent manufacturing plants had higher survival rates than larger plants and multi-unit plants, such as branch plants (Low 2017). Of course, there are two sides to the credit market and a decline in the demand for small business credit due to lower new business formation rates may be part of the explanation.



The healthcare sector also provides ample opportunities for rural economic development. For every job in a rural hospital, an additional 0.34 jobs are created in other businesses in the local economy. For every dollar in salary and benefits a rural hospital pays staff, an additional 19 cents in secondary wages and benefits is generated in the local economy (Doeksen et al., 2016). As of September 2017, 60 percent of Health Professional Shortage Areas, as identified by the Department of Health & Human Services, are in rural America and encompass 22.2 million rural residents.

2 Non-urban areas defined as Town & Rural segments. These areas contain households that are classified with one of those two urbanicity classifications. The population density scores where they are found range from 0 to 40. This category includes exurbs, towns, farming communities, and a wide range of other rural areas. The town aspect of this class covers the thousands of small towns and villages scattered throughout the rural heartland, as well as the low-density areas far beyond the outer beltways and suburban rings of America's major metros. Households in the exurban segments have slightly higher densities and are more affluent than their rural neighbors. DoD Population Representation report 2015 (https://www.cna.org/research/pop-rep) page 125.

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Overall, identifying key regulatory reforms, streamlining processes, and improving interagency coordination is required to create conditions in which the rural economy can thrive. For example, the cost of providing or restoring clean water for a community of only a few hundred citizens can be upwards of hundreds of thousands to millions of dollars. Without the financial assistance of the federal government, these projects would be impossible to afford. While federal agencies can often provide most of the funding necessary, either in the form of loans or grants, communities must still provide some portion of the financing. In addition to the cost of the construction, communities must also be able to afford to get their projects through the approval process. Even for small projects, the complexity of the environmental review process alone, requiring the coordination of various state and federal agencies and the services of a professional environmental consulting firm, can cost more than $20,000. While that may be affordable for a city, for a small rural community this extra cost can be a deal-breaker. That means for some communities, residents must go without even the most basic of public services.

Objectives & Recommended Actions

1. **Access to Capital** – Rural business men and women, entrepreneurs, as well as beginning farmers and ranchers, often have difficulty accessing capital to help them start, grow, and expand their businesses. They are often either too large or too small to qualify for, or gain access to, available loans and lending programs. In addition, Wall Street and Silicon Valley have struggled to access rural markets which are therefore not primed to take their cash. Agricultural lenders tend to operate far differently than venture capital firms and global private investors. With the number of small and community banks declining, we need to help communities identify and develop projects appropriate for private investment. The Task Force recommends that future strategies include:

    a. **Equity Financing** – Allowing new obligations in federal and state loan and credit programs to be used to meet equity requirements, or a first-loss-position, could help rural communities bring additional financing to the table.
    b. **Debt Financing** – With renewed focus and goals for agricultural and non-agricultural lending in rural counties by both the Department of Agriculture and Small Business Administration (SBA), SBA is able to provide loans up to $5.5 million.
    c. **Bundle/Repackage Projects and Deals** – A legal/finance vehicle to bundle projects can bring the necessary scale to attract private sector interest and take advantage of economies of scale to deliver cost savings.
    d. **Regional and State Collaboration** – Projects can draw upon larger revenue streams when approached regionally. There are more financing options and deeper expertise when state wide and regional entities are involved.

2. **Leverage Existing Market Opportunities** – Larger and more strategic public-private sector opportunities should be sought for rural America. Locally-transformative actions create jobs and lift up local economies. Many of these opportunities languish in regulatory uncertainty, or struggle with volatile economic risk profiles. Among the expertise within the federal family, lies the opportunity to make a big difference in the lives of rural families, farmers and ranchers. We should engage the private financial sector and work to identify opportunities already in their pipeline. The federal government could provide guidance to find ways to help capital markets expedite deal execution that quickly benefit rural economies.

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3. **Create a Rural Prosperity Investment Portal** – A web based portal enabling rural based investment partnerships – public or private – will serve as a matchmaking tool for project promoters to reach domestic and international investors. The portal can mobilize investments, promote economic growth and create more jobs across rural America. In partnership with the Opportunity Project, the proposed Commission on Agriculture and Rural Prosperity should coordinate with the Department of Commerce and the Department of Agriculture to engage the tech sector through the creation of digital tools that expand rural prosperity, such as an investment portal. The Opportunity Project involves collaboration across government agencies, local governments, tech companies, community organizations, and more, to create new digital solutions that help families, businesses, local officials, and other members of the public access economic opportunity. To date, over 45 digital tools have been created by tech companies through the Opportunity Project.

4. **Build a Better Tax Code** – Rural Americans who work hard every day to provide food, fiber, fuel, manufactured goods, and services for their fellow citizens shouldn't be overburdened by the tax collector. Reforms to federal tax policy are long overdue. Most family farms and rural entrepreneurs operate as small businesses, where the line between success and failure is razor thin. Add to that the complexity and costs of merely complying with the tax code, and their budgets are stretched even tighter. The federal government should build a better tax code to encourage investment, create jobs and help Americans keep more of their hard-earned money.

5. **Increase Agricultural, Forestry and Food Production** – With world food demand expected to double in 40 years, leadership is necessary to meet this economic opportunity and humanitarian imperative. Keeping future generations on the farm is one of the best ways to ensure that the demand for food, fiber, and energy production is met. Family-run operations provide economic and social continuity to their communities across generations, so federal policies should encourage their transfer to family members willing to remain on the farm. For example, key community stakeholders, including grocery stores, distributors, value-chain actors, universities, and more, will soon be able to engage and franchise a community economic development model as well as share success stories. In addition, local, regional, and state leaders will be convened to engage in a discussion on effective methods of economic development and coordination with federal investment as well as to discuss how federal, regional, state and local incentives and regulations can support and/or hinder agriculture in their area. This coordination will result in"Agricultural Community Economic Development" model tool kits being developed and deployed for the Department of Agriculture, rural partners, and farmers.

6. **Remove Regulatory Barriers to Developing and Accessing Natural Resources** – Rural communities are often rich in natural and renewable natural resources, energy sources, and minerals. These communities should be able to responsibly and sustainably access, use, and profit from those local assets without undue federal restrictions and intervention. The Task Force recommends that the following actions be initiated within the federal government: improve interagency coordination to reduce process burden through environmental analysis and decision-making efficiencies; streamline consultation processes using standard decision-making templates and implementing regulatory changes; integrate digital service systems to improve customer service, and reduce delivery of services; develop and test the issuance of permits electronically (e-Permitting); and, develop and implement a modernized 'special use' permitting system, including a web-based ePermit system that offers

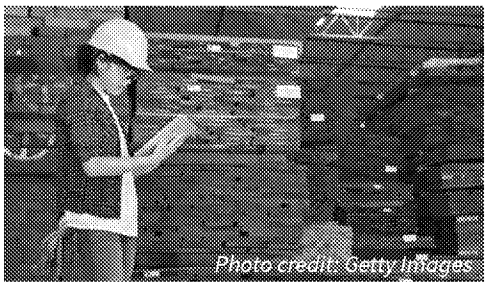
Photo credit: Getty Images

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convenience and a high-quality user experience to the public. Components of this system are already taking shape between the Department of Agriculture and Department of Interior.

7. **Regain American Energy Dominance** – Rural America is a source of resources that can fuel the nation and the world. Boosting production of all sources of energy from natural gas, oil, coal, nuclear, and renewables is essential to America's national security interest and rural America's economy. The federal government must ensure a regulatory environment which can unleash this potential while keeping Americans safe and healthy. This increase in production of domestic fuels will bring jobs back to rural America and promote energy security. We must also continue research and development for new sources of energy to ensure that America leads the world in innovative energy sources. Overall, this boost in energy production will benefit rural communities, boost U.S. tax revenues, and increase our power in the global energy market.

Photo credit: Getty Images

8. **Rebuild and Modernize Rural America's Infrastructure** – The economic success of future generations and rural communities depends on rehabilitating transportation infrastructure, closing the infrastructure gaps within rural communities, and enhancing connection to metropolitan areas.

    a. **Increase "Made in America" Outputs** – Increasing "Made in America" output in agriculture, manufacturing, forestry, and mining requires investment in capacity and modernization of rural infrastructure to connect rural production facilities and businesses to nationwide and global commerce. Increased output will result in unleashing the full potential of the U.S. economy and the creation of rural job opportunities, ensuring that rural areas are attractive and prosperous places to live for generations to come.
    b. **Address Commercial Infrastructure Gaps** – The key infrastructure gaps that need to be addressed are those that carry commerce for rural America, especially in the first and last mile. Transportation infrastructure of all modes – roads, bridges, railways, and waterways – must be upgraded and expanded with the capacity needed to accommodate the additional crops and products that are made in America's rural economies, including food, fiber, forests, and factory-made commodities and specialty-goods.
    c. **Develop the "Digital Superhighway"** – The "digital superhighway" for connectivity must be built out to support rural economies' connection to all applications of global commerce, including support of data transfer needed for the Internet of Things and future deployment of autonomous vehicles. In the short term, better collaboration among the Department of Transportation, Department of Agriculture, Army Corps of Engineers, Department of Energy, and others will enable the strategic rehabilitation and build-out of the infrastructure needed to carry freight to, within, and from rural production sites in today's and tomorrow's economy.
    d. **Expand State and Local Transportation Capacity** – Empowerment of state and local governments to expand and maintain infrastructure will ensure rural transportation capacity supports local and regional demands for freight flow.

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9. **Cutting Red Tape** – To ensure the quickest and most effective deployment of new investments in infrastructure, federal environmental permitting must be simpler and speedier. Regulatory reforms, streamlining processes, and improving interagency coordination must occur to create conditions in which the rural economy can thrive from the farm gate and small business up through the value-added chain. Our federal actions must also be as customer-centric as possible and we must ensure that our regulations and policies are up-to-date, necessary, and effectively achieving their purposes, while simultaneously being as affordable and consistent as possible. If inconsistencies or interferences with reform initiatives, or actions that eliminate jobs or inhibit job creation are identified, we must take steps to lessen or remove their negative impacts. One such action that can be taken in the short term is to fully implement One Federal Decision (OFD) and FAST-41 policies and recommendations within environmental authorization actions. All federal agencies should actively participate in all FAST-41 and OFD working groups to ensure that any lessons learned are applied to improve environmental authorization processes.

10. **Increase Access to Global Market** – Based on fair trade principles, international market access must be aggressively pursued and supported. Physical infrastructure and e-connectivity must be improved and maintained to connect farms and rural communities to the world. American agriculture needs and deserves policies that support and build on this success - by opening markets abroad; by ensuring fair and science-based regulatory treatment for American products of all kinds; and by implementing strong enforcement policies that hold trading partners to their commitments. In the next three years, our administration will take on challenges ranging from high tariffs on dozens of products – including meats, dairy, rice, soy, wheat, fresh fruit and vegetables, and more – to unscientific regulation of biotechnology products and other goods; inappropriate use of geographical indications in ways that shut out American producers of wines, cheeses, and other high-value products; and escalating levels of domestic supports in large emerging economies. We will address these through fair negotiations, use of World Trade Organization and Free Trade Agreement dispute settlement rights, and all other means at our disposal.

Photo credit: USDA Flickr

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Message

From: Kyle Harris [kharris@corn.org]
Sent: 2/14/2018 2:21:05 PM
To: Atkinson, Emily [Atkinson.Emily@epa.gov]
CC: Gunasekara, Mandy [Gunasekara.Mandy@epa.gov]; Dominguez, Alexander [dominguez.alexander@epa.gov]; Sands, Jeffrey [sands.jeffrey@epa.gov]; Subramanian, Hema [Subramanian.Hema@epa.gov]
Subject: RE: Meeting Request with Assistant Administrator Wehrum (re: Biogenic CO2 Coalition)
Attachments: Biogenic CO2 Coalition Pruitt Letter (02-09-18).pdf

Flag: Follow up

Dear Emily,

Thank you for your note responding to our request to meet with Assistant Administrator Wehrum regarding biogenic CO2 regulation. We are certainly willing to meet with Mr. South and Ms. Lie, though we do not understand how they would be in a position to chart a course for resolution of the biogenic CO2 issue. This involves CO2 from fermentation tanks at stationary sources, separate from combustion.

When time permits, we respectfully request that Mr. Wehrum meet with us to discuss this Obama era exercise in regulatory overreach that is stifling development of promising renewable technologies and the rural economy, as explained in our recent letter to Administrator Pruitt (please find attached).

Thank you for your consideration.

Kyle A. Harris, Esq.
Manager, Environmental Affairs/ Workplace Safety
Corn Refiners Association
www.corn.org
1701 Pennsylvania Ave NW
Suite 950, Washington, DC 20006
Office
Cell: Ex. 6 - Personal Privacy

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From: Atkinson, Emily [mailto:Atkinson.Emily@epa.gov]
Sent: Tuesday, February 13, 2018 8:24 AM
To: Kyle Harris <kharris@corn.org>
Cc: South, Peter <South.Peter@epa.gov>; Lie, Sharyn <Lie.Sharyn@epa.gov>
Subject: FW: Meeting Request with Assistant Administrator Wehrum (re: Biogenic CO2 Coalition)

Hi Kyle,

Bill Wehrum has reviewed your meeting request and asked that the Office of Air Quality and Planning Standards (OAQPS) and Office of Transportation and Air Quality (OTAQ) to take this meeting on his behalf.

I am copying staff from each office on this note so you can coordinate setting up a meeting.

Emily

Emily Atkinson
Management Analyst/Office Manager
Immediate Office of the Assistant Administrator
Office of Air and Radiation, USEPA
Room 5412B, 1200 Pennsylvania Avenue NW
Washington, DC 20460
Voice: 202-564-1850
Email: atkinson.emily@epa.gov

From: Kyle Harris [mailto:kharris@corn.org]
Sent: Thursday, February 01, 2018 3:18 PM
To: Atkinson, Emily <Atkinson.Emily@epa.gov>
Cc: Dominguez, Alexander <dominguez.alexander@epa.gov>
Subject: Meeting Request with Assistant Administrator Wehrum

Ms. Atkinson,

The Biogenic CO2 Coalition would appreciate the opportunity to meet and brief Mr. Wehrum directly on the regulation of CO2 from the processing of short-cycle herbaceous crops.

I look forward to working with you to get on his calendar in the coming weeks.

Thanks in advance,

Kyle Harris

Kyle A. Harris, Esq.
Manager, Environmental Affairs/ Workplace Safety
Corn Refiners Association
www.corn.org
1701 Pennsylvania Ave NW
Suite 950, Washington, DC 20006
Office
Cell: (Ex. 6 - Personal Privacy

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BIOGENIC CO2 COALITION

Members

American Bakers Association

American Farm Bureau Federation

Corn Refiners Association

Enginuity Worldwide

National Corn Growers Association

National Cotton Council of America

National Cottonseed Products Association

National Oilseed Processors Association

North American Millers' Association

February 9, 2018

The Honorable Scott Pruitt
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Re: Supporting American Agriculture Investment by Removing Illegal Regulation of Biogenic Emissions

Dear Administrator Pruitt,

The Biogenic CO2 Coalition respectfully requests that EPA revise its permitting requirements regarding biogenic CO2 under the Clean Air Act. Through an act of illegal regulatory overreach, EPA interpreted "elevated" levels of CO2 to include natural (i.e., biogenic) CO2 from agricultural crops as a pollutant. Explanation of this error may be found in the fact that EPA never completed a scientific review of biogenic CO2. Removing this barrier to agricultural production and rural development would advance your laudable commitment to science-based regulation, regular order, and regulatory reform.

U.S. agriculture feeds the world, while providing modern day bioeconomy solutions in the form of nutrients, bioenergy, and advanced bioproducts like bioplastics, pharmaceuticals, and personal care products made from corn, cotton, soy, oilseeds, and other agricultural feedstocks.

The bioeconomy delivered the United States $393 billion in economic benefit and 4.2 million American jobs in 2014 and is expected to grow exponentially. Building on the success of pioneering biotechnology, Coalition members are poised to invest billions of dollars in rural America. The United States is well-positioned to capture a dominant share of global biobased economic growth and employment opportunities.

However, investment in the bioeconomy is jeopardized by an EPA policy interpretation that overextends its greenhouse gas endangerment finding to include biogenic carbon from the processing of agricultural feedstocks. Renewable biomass is now subject to onerous permitting delays, costs, and uncertainty which is blocking billions of dollars of investment in new bioproducts facilities. As a result, this regulatory burden is substantially stifling rural economic development.

Despite this lack of any scientific record, EPA has refused to recognize that American farmers capture carbon while planting and growing feedstocks and that the same biogenic carbon is

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organically released as part of the natural carbon lifecycle when crops are subsequently processed to produce bioproducts, food, fiber, biofuels and bioenergy.

The undersigned support your efforts at regulatory reform and agree with your view that science should precede regulation. Because these core principles were not followed in regulating agricultural CO2, we respectfully request that you clarify the regulatory status of biogenic CO2 as a priority for supporting American agriculture.

Thank you for your consideration

Sincerely,

American Bakers Association
American Farm Bureau Federation
Corn Refiners Association
Enginuity Worldwide
National Corn Growers Association
National Cotton Council of America
National Cottonseed Products Association
National Oilseed Processors Association
North American Millers Association