

**STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION**

STAFF REPORT FOR REGULAR MEETING OF JUNE 28-29, 2018
Prepared on June 2, 2018

ITEM NUMBER: 12

SUBJECT: Healthy Soil Projects, Composting and Gleaning Crops

STAFF

CONTACT: Christopher Rose (Chris.Rose@Waterboards.ca.gov)

ACTION: Informational

BACKGROUND

The March and May 2018 Central Coast Water Board meetings focused on surface and groundwater quality conditions, respectively. During these board meetings, staff and external speakers discussed water quality conditions pertaining to nitrogen, herbicides, insecticides, sediment and salts. At the May 2018 board meeting, we also discussed management practices and technologies aimed at reducing the discharge of pollutants, including irrigation and nutrient management practices and the use of lysimeters.

This informational item continues the discussion of practices that can reduce pollutant loading. The topics and speakers for this item touch on soil health and its relationship to water quality and nitrogen removal of unharvested plant material as a method to reduce nitrogen loading and pollution.

DISCUSSION

Healthy Soils Initiative and Funded Local Projects

Governor Brown's Executive Order B-30-15 in April 2015 established a goal of 40% reduction in greenhouse gases from 1990 levels by 2030. As part of this effort, the proposed 2015-2016 state budget stated that "as the leading agricultural state in the nation, it is important for California's soils to be sustainable and resilient to climate change."

The Healthy Soils Initiative (Initiative) is a key component of attaining the greenhouse gas reduction goal. The Initiative is a collaboration of efforts by state agencies, led by the California Department of Food and Agriculture (CDFA), to promote healthy soils on California's farms and rangelands. At the heart of the Initiative is the effort to increase soil health by increasing soil organic matter; doing so helps achieve the following goals:

- Sequester and reduce greenhouse gases
- Increase water infiltration and retention
- Reduce sediment erosion and dust

- Improve water and air quality
- Improve biological diversity and wildlife habitat
- Improve plant health and yields

The Initiative identifies five primary actions:

1. Protect and restore organic matter in soils
2. Identify financing opportunities to promote healthy soils
3. Provide research, education and technical support
4. Increase governmental efficiencies to enhance soil health
5. Promote interagency coordination and collaboration to support healthy soils

Examples of how the actions are implemented include:

- Expand the use of soil amendments to increase carbon content, such as compost
- Evaluate other carbon-based amendments, such as biochar
- Balance synthetic inputs, such as synthetic fertilizer, with carbon based inputs
- Promote on-farm water storage and groundwater recharge
- Provide funding for implementation, research, demonstration projects
- Provide technical assistance through Resource Conservation Districts, UC Cooperative Extension and Natural Resource Conservation Districts
- Reduce the time required for governmental oversight
- Increase composting operations by permitting 30-100 new or expanded facilities by 2020
- Coordinate agency activities

Link to Healthy Soils Initiative information:

<https://www.cdfa.ca.gov/healthysouils/>

First Presentation: Community Environmental Council

The Community Environmental Council is a non-profit organization promoting solutions in areas impacted most by climate change. Solutions include carbon farming through composting and a food action plan that supports a healthy economy, food source and environmentally sustainable approach.

Ms. Allegra Roth is a Food and Climate Program Associate at the Community Environmental Council (CEC). Ms. Roth will provide a summary of the CECs efforts as they relate to agricultural activities on the central coast.

Link to Community Environmental Council website:

<https://www.cecsb.org/>

Second Presentation: Composting and Possibilities of Unharvested Crop Material

The Association of Compost Producers (ACP) is a non-profit organization whose goal is to increase the quality and quantity of compost being produced in California. Members meet monthly to discuss various topics related to the ACP goals. There are two local members of the ACP: Cal Poly San Luis Obispo, and Engel & Gray, Inc. in Santa Maria.

The goals of the Association of Compost Producers and Healthy Soils Initiative are aligned; one of the stated actions of the Healthy Soils Initiative is to increase soil carbon using compost.

Unharvested crop material is a clean and desirable source for composting, relative to urban sources which can be contaminated with non-compostable materials. Additionally, a significant amount of nitrogen is often left on the field in non-harvested portions of the crop; removing and composting this material could help reduce waste residual nitrogen and decrease nitrogen discharges to ground and surface waters.

Mr. Daniel Wylder Noble has been the Executive Director of the Association of Compost Producers since 2002. Mr. Wylder Noble is also the founder of the Noble Resources Group, a bioproducts market and industry development firm, based in California. Mr. Wylder Noble will provide a presentation summarizing compost, its benefits and the potential of increasing the composting of unharvested crop material.

Link to the California Association of Compost Producers:
<http://www.healthysoil.org/>

Third Presentation: Gleaning: Rescuing Unharvested Crops

GleanSLO is a group in San Luis Obispo whose volunteers gather produce from various sources; the produce is then donated to local food banks. Sources of the gleaned produce include leftover (unmarketable) crops from fields that have already been harvested, farmers markets and surplus from backyard and community gardens.

GleanSLO staff are interested in reaching out to growers willing to participate in the collection of leftover crops from their fields. Recall that a significant amount of nitrogen is often left on the field in non-harvested portions of the crop; gleaning this material could help reduce residual nitrogen waste and decrease discharges to ground and surface waters. Additionally, gleaning provides an important food source to local food banks who assist disadvantaged families and communities.

Ms. Roxanne Sanders is the Program Manager and Ms. Emily Wilson is the Program Coordinator of GleanSLO. Ms. Sanders and Ms. Wilson will provide a presentation summarizing the gleaning program, the program's association with the food bank, community need and advantages for participating growers.

Link to GleanSLO website:
<http://www.gleanslo.org/>

CONCLUSION

Some of these low-tech solutions are not currently in broad use throughout the region. Staff provides this information to inform the board, farmers, and agricultural assistance groups of added strategies to reduce and inhibit waste discharges. Central Coast Water Board staff will continue to provide information on strategies farmers and others can utilize to reduce waste impacts to surface and groundwater.