

## **Oakland Comprehensive Plan**

### **Full Committee (Optional): Health and Quality of Belgrade Lakes**

5.21.2018

4pm

Attendees: Gary Bowman, Mark Fisher, Donna Griffin Shawn Marquis, Robert Nutting, Cindy Reese, Kelly Roderick, Mike Rossignol, Dale Sturtevant, Chuck Sweigart,

Facilitator: Garvan Donegan, CMGC

Guest Speaker: D. Whitney King, Frank and Theodora Miselis Professor of Chemistry at Colby College

#### **Agenda:**

1. Approve minutes
2. Brief update of public input + forum
3. Whitney King: overview of ecosystem health and water quality of Oakland's marine resources
4. Next steps

#### **1. Approve minutes**

Motion to approve minutes as written made by Donna, seconded by Cindy; all in favor, no discussion, so moved.

#### **2. Public input + forum update**

The original scheduled date for the public forum (May 31) created too tight of a timeline; the public forum has been rescheduled for June 21, to be held in the police station community meeting room. To address concerns that high school students would not be in school when the public forum is held, OCPC will schedule a second public forum in the fall.

The community survey has been uploaded to the SurveyMonkey software. The three volunteer testers will receive the survey within 24 hours, and then the entire OCPC will receive access.

A press release has been prepared and will be circulated among OCPC. The press release will provide information on the CompPlan, the public forum, and the community survey.

The Public Input & Survey subcommittee will reconvene to plan the public forum and survey release. Their meeting will be open to any OCPC member interested in planning.

CMGC staff has begun to integrate draft CompPlan sections edited by OCPC and/or Town department heads. OCPC members have provided tremendous input on the CompPlan and will continue to do so, but are not expected to write the plan. CMGC is currently editing the CompPlan for a unified voice and building out the sections and appendices with collected data and maps.

### 3. Overview of ecosystem health and water quality of Oakland's water bodies

Professor King's research on the Belgrade Lakes has spanned over 10 years. He credits volunteer lake monitors for collecting strong data which can be used to establish trends.

King's presentation highlighted East Pond, which currently experiences algae blooms. Algae blooms cause health problems for swimmers and decrease property values by 30%. When a lake's inflow of nutrients is greater than its outflow of nutrients, the excess nutrients feed lake bottom bacteria, which consume oxygen. When the bacteria consume oxygen, the lake can not sustain fish; when excess nutrients rise above the lake's thermocline (which separates the warm top from the cold bottom), algae blooms occur.

There are three methods to prevent algae blooms:

- Oxygenation (hurts recreational value and must be done annually in perpetuity)
- Dredging the bottom of the lake (prohibitively expensive)
- Adding aluminum (the most cost-effective and sustainable)

East Pond Lake Assoc. raised \$1mil to add 120 tons of liquid aluminum to the areas of East Pond with depths below 5 meters. The project will be done in two batches and will take approximately 29 days. The effect will be immediate, and East Pond should not bloom for the next 10-30 years. There have been 50 similar projects throughout the United States. The amount of aluminum added does not alter the safety of the water for either humans or fish.

A key criterion to be chosen as a site for aluminum addition is the existence of a lake management plan. The next site is intended to be Salmon Pond, which blooms most years.

Great Pond has become 30 times more anoxic in the past 30 years.

While Messalonskee Lake is impacted by all other lakes in the watershed, its fast water flow somewhat inoculates it from the water quality problems of other lakes.

Major Considerations:

- What is the economic value of healthy water bodies and good fishing?
- How can the risk of milfoil be mitigated while marketing Belgrade Lakes fishing?
- How can the efficacy of aluminum be extended 30 years, rather than 10 years, by addressing excess inflow of nutrients?
  - o 70% lies within lakes, 30% is external
    - External sources: animals, silt and sand, septic systems, atmosphere
- How can strong data collection, analysis, and communication be supported?
- A balanced lake (inflows = outflows) can more easily survive climate change.
- Water quality goals are achieved through a combination of history & sense of place, community involvement & action, and scientific knowledge (limnology, ecology, modeling)
- Potential resources include LakeSmart and the Colby College Alford Commons student residents, who must become engaged in civic activities.

#### **4. Next Steps**

- Public Input & Survey subcommittee will reconvene to plan public forum and survey release
- Online survey will be sent to volunteer testers and OCPC members
- Press release will be sent to OCPC members for review

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