Protecting public safety, the regional economy and critical infrastructure.
Presentation Overview

- Operating Budget Preview
- Capital Project Policies and Criteria
- Capital Project Status and Preview of 2014-9
- Next Steps for 2014 Budget Proposal
- Discussion Questions:
  - Questions, Comments, Additional Information for May 30?
Flood Control District Operating Programs

Flood Risk Reduction Approach:
- Identify hazards
- Assess risk and vulnerabilities
- Build awareness of hazards
- Develop a plan and strategy to reduce risks
- Actions to avoid risk
- Actions to reduce or mitigate risk
- Evaluation and adaptation

Flood District Work Program
- Flood Preparedness, Regional Flood Warning Center, and Post Flood Recovery
- Planning, Grants, Mitigation, and Public Outreach
- Flood Hazard Assessments, Mapping, and Technical Studies
- Resource Management, Annual Maintenance, and Facility Monitoring
2014 Proposed Preliminary Draft Operating Reductions

- 2013 Adopted Budget: $9.913M
- 2014 Budget Preliminary draft request: $9.598M
  - Reduction reflects one-time 2013 expense of Sammamish Transition Zone maintenance, “topping off” of BRPS fuel tanks
- Financial plan assumes further reduction to @ $9.13M in 2015 due to:
  - Reduced levee vegetation mgmt on the Green
  - SWIF includes vegetation mgmt, so 2015-2019 costs will be refined through this effort
- Detailed Operating Budget by ILA category at May 30 meeting
Capital Project Evaluation and 2014-9 CIP Preview
Evaluation Criteria: Project Evaluation Approach

NOTE: This is a conceptual diagram and is not intended to imply clear and distinct thresholds between these categories.
### 2008-2012 Capital Expenditures

<table>
<thead>
<tr>
<th>Category</th>
<th>Snoqualmie/SF</th>
<th>Cedar</th>
<th>Green</th>
<th>White</th>
<th>Countywide Miscellaneous</th>
<th>Seattle</th>
<th>Subreg’l Opp. Fund</th>
<th>Total</th>
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<tbody>
<tr>
<td>Acquisition</td>
<td>$18,662,000</td>
<td>$12,714,000</td>
<td>$12,315,000</td>
<td>$4,856,000</td>
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<td>Levee Construction/Repair</td>
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<td>$3,572,000</td>
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<td>$13,439,000</td>
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<td>Emergency Repair/Prep</td>
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<td>Farm/Flood Task Force</td>
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<td>Payments to Jurisdictions</td>
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**NOTE:** FCD Expenditures only; does not include $25M in Corps PL 84-99 levee expenditures
## 2008-2012 FCD Capital Accomplishments

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<tr>
<th></th>
<th>Snoqualmie-SF Skykomish</th>
<th>Cedar - Sammamish</th>
<th>Green - Duwamish</th>
<th>White River</th>
<th>TOTAL</th>
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<td><strong>Acquisition</strong></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>46 properties, 160 acres</td>
<td>18 properties, 15 acres</td>
<td>6 properties, 42.6 acres</td>
<td>18 properties, 17.4 acres</td>
<td>88 properties, 235 acres</td>
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<td><strong>Home Elevation</strong></td>
<td></td>
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<td>50</td>
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<td><strong>Barns/Ag Structures</strong></td>
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<tr>
<td></td>
<td>2 barn elevations</td>
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<td><strong>Farm Pads</strong></td>
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<td>26</td>
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<td><strong>Demolitions/structure removal</strong></td>
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<td>76</td>
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<td>11 demolished (6 relocated)</td>
<td>137 demolished (6 structures relocated)</td>
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<td><strong>Construction Projects</strong></td>
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Snoqualmie Flood Risks

- **Flood inundation**
- **Channel migration**
- **Bank erosion**
- **Alluvial fan hazards**
Corridor studies to determine best approaches (2013-14)
  • Middle Fork
  • South Fork
  • Tolt
  • Snoqualmie at Fall City

Focus on “non-structural” measures where feasible
  • Buyouts
  • Home elevations
  • Farm pads

Protect critical infrastructure
  • Levee retrofits and relocations
  • Repairs when needed
  • Sediment removal where appropriate

• Set back levees to allow room for floodwater and gravel storage, increase conveyance
South Fork Levee Improvements

- Flooding and levee stability concerns
- Corridor study
- Phased implementation
- Construction starting 2015
- Possible partnership with WSDOT to expand Bendigo Blvd bridge
- Coordination with North Bend

Project Benefits: Improved flood protection to residential, commercial, and industrial properties, SR202 and local roads in North Bend and unincorporated King County. Reduced long-term maintenance costs
Middle & North Forks Snoqualmie

- Dynamic alluvial fan
- High channel migration and erosion risks
- Facilities require frequent and costly repairs
- Home buyouts and Middle Fork Corridor project
Middle Fork Conveyance Improvements

- Channel migration and flooding concerns
- Corridor study
- Construction beginning 2014 or 2015
- Coordination with North Bend

Project Benefits: Reduced risk to public safety and flooding of homes, businesses, and roads in northeastern part of North Bend and unincorporated King County. Reduced long-term maintenance costs.
Lower Snoqualmie

- Deep, broad floodplain; levees do not limit flooding
- CIPs include home elevations, farm pads, barn elevations
- Two large-scale bank repairs
- Levee setback projects (corridor study)
- Landowner interest in basinwide study of flooding drivers
Sinerra Qualle Upper

- Rapidly eroding bank
- Protects SR 203, Snoqualmie Valley Trail
- 2014 or 2015 construction
- Possible partnership with WSDOT

**Project Benefits:** Provide erosion protection for SR 203, regional fiber optic trunk line, and Snoqualmie Valley Regional Trail
Winkelman
(Tolt Pipeline Protection)

- Rapidly eroding bank
- Protects SPU Tolt water supply pipeline
- 2015 construction

**Project Benefit**: Provides erosion protection for the Tolt River water supply pipeline, which carries 30% of potable water supply to north-end communities supplied by Seattle.
Snoqualmie at Fall City and Aldair Levee

- Four potential levee setbacks
- Aldair levee seepage and geotechnical problems, very high risk
- Six properties acquired behind Aldair levee
- Costs and schedule TBD (technical analyses underway)

*Flooding at Aldair Levee*
Tolt River

- Steep, dynamic river
- High sediment load, high channel migration risk
- Most of lower 2 miles leveed
- Tolt River Corridor Plan will establish priorities, strategy early 2014
  - Buyouts in high channel migration hazard
  - Levee setbacks to increase flood and sediment storage
Cedar-Sammamish Strategy

- Reduce flood velocities and volumes that threaten critical public infrastructure, residential dwellings, and block sole-access roads
- Reduce public safety risks associated with neighborhood-scale flooding and channel migration
- Corridor Study to prioritize levee setbacks
Channel Migration Hazard Zone
Riverbend MHP
Riverbend Mobile Home Park Status

- $3M from Flood Control District
- 87 Mobile Homes + 55 RVs
- Appraised value: $6.75M
- Offer extended January 2013, under negotiation
- With relocation – eliminates substantial flood/erosion hazard risk
- 18.6 Acres - completes 4 miles of contiguous public on left (south) bank

1990 Revetment washout undermines homes.
Cedar River Gravel Removal

February 1996
Flood peak 7520 cfs in Renton

January 2009
Flood peak 9470 cfs in Renton

Dredging channel to maintain capacity
White River: Countyline and Right Bank

- Proposed KCFCD capital projects are levee setbacks to provide increased flood capacity
- Two large-scale projects are proposed to be installed between A-Street and 8th Street bridges
  - Countyline Levee Setback
  - Right Bank (Pacific) Levee Setback
Green River Strategy

- Rehabilitate levees to current engineering designs to protect critical public infrastructure and regional distribution centers.

- Although not feasible in all cases, setting back the levees is the preferred design to meet necessary geometry for a stable slope and installation of habitat features.

- Multi-Stakeholder “System-Wide Improvement Framework” to identify appropriate level of service, prioritize levee improvements, and provide alternative approach for managing vegetation.

**LEVEE SETBACK PROJECTS**

2006 KING COUNTY FLOOD HAZARD MANAGEMENT PLAN

- Setting back an existing levee

- Vegetated bench
- Increased flow area

**Bio-engineered levee setback - Lower Green River**
Reddington Levee Setback

- **Project Benefits:** Protect 596 residential and commercial properties with assessed value of $680 million, designed for 0.2% annual flood (500-year)
- $1 million state grant (terms require construction in 2013)
Horseshoe Bend Levee Rehabilitation

- Provide integrated system of stable levees to protect Kent, Renton and regionally significant land uses
- Design and construction depend on outcome of SWIF
Upper Russell Road Levee

Problem:
• Levee is too steep, structurally inadequate, and subject to chronic, ongoing, and repeated slope undercutting and slumping failures.
• Flood impacts extend north through densely developed and populated commercial and residential areas of Kent and Renton

Proposed Solution:
• Acquire needed right-of-way (no structures) and relocate Russell Road/James St intersection so levee can be set back to a stable geometry
Black River Pump Station Improvements
2014 Capital Highlights

- **White:**
  - Updated costs for 2 projects in Pacific (construction 2014-7)
  - Continue to hold some funding for acquisitions in channel migration areas in upper basin

- **Green:**
  - “SWIF” on the Green to develop shared vision and priorities for near and long-term
  - Construction at BRPS, Briscoe, Reddington, and possibly Upper Russell

- **Snoqualmie:**
  - Corridor planning information
  - 4 projects going to construction in 2014-5
  - Acquisition and elevation of at-risk structures
  - Farm pads and barn elevations

- **Seattle:**
  - Updated schedules for South Park and Seawall

- **Cedar/Sammamish:**
  - Feasibility of Cedar levee setbacks
  - Acquisitions of key parcels
  - 2 construction projects 2014-2016 (Cedar 205 gravel removal, Elliot Br)
  - Feasibility of Coal Creek channel improvements
  - McAleer/Lyon grant cost-share

- **WRIA and SROF:**
  - Status Quo for SROF
  - Inflation factor for WRIAs?

- **Possible revised revenue assumptions**
  - WSDOT funding for Cedar River (Elliott Bridge)
  - Conservation Futures Trust: Lower Russell/Holiday Kennel
  - FEMA mitigation grants (Home Elevation Grant under review by FEMA now)
  - Update FCD levy revenue based on latest projections
2014 Budget Development Process

- Basin-level review of project status and key changes (late April)
- **Advisory Committee May 1 2014 Budget Preview (today)**
- Joint BTC meeting May 7 to review operating proposal and combined CIP proposal
- Distribute 2014 budget proposal and CIP list by May 17
- Advisory Committee May 30: “Temperature Read”?
- Advisory Committee June 26

- Materials to be Provided:
  - Capital Project List: document proposed revisions from 2013 adopted budget
  - Capital project status proviso report; FCD annual report
  - Operating: Work Program Scope
  - All budget attachments: by basin, by project, by program, Subregional Opportunity Fund, District administrative costs
  - Financial Plan: What’s the Bottom Line?
Flood Preparedness Information

King County Flood Services
www.kingcounty.gov/flood

- King County Flood Alerts
- King County flood gage and phase information
- Sandbag distribution information

King County Flood Control District
www.kingcountyfloodcontrol.org